

**PHASE 1 ARCHAEOLOGICAL AND CULTURAL IMPACT ASSESSMENT (AIA) FOR THE
PROPOSED BLIKANA PROJECT, JOE GQABI DISTRICT MUNICIPALITY, EASTERN
CAPE PROVINCE**

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PHASE 1 ARCHAEOLOGICAL AND CULTURAL IMPACT ASSESSMENT (AIA) FOR THE PROPOSED BLIKANA PROJECT, JOE GQABI DISTRICT MUNICIPALITY, EASTERN CAPE PROVINCE

NOTE: The phase 1 archaeological and cultural impact assessment was conducted as a requirement of the ECPHRA (Eastern Cape Provincial Heritage Authority) and National Heritage Resources Act 25 of 1999, Section 38(1):

38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorized as –

(a) the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;

(b) the construction of a bridge or similar structure exceeding 50 m in length;

(c) any development or other activity which will change the character of the site –

(i) exceeding 5 000 m² in extent,

(d) the re-zoning of a site exceeding 10 000 m² in extent,

This report follows the minimum standard guidelines required by the South African Heritage Resources Agency (SAHRA) and the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) for compiling a full Phase 1 Archaeological Impact Assessment (AIA). The Eastern Cape Provincial Heritage Resources (ECPHRA) has been the competent authority in the Eastern Cape Province since 2012. All heritage reports must be submitted to the Eastern Cape Provincial Heritage Resources Authority (ECPHRA) for comment and uploaded to the South African Heritage Information System (SAHRIS) database.

DECLARATION OF INDEPENDENCE

Ms Celeste Booth was appointed on a strictly professional basis to conduct the archaeological and cultural heritage assessment for the proposed Blikana Project, Joe Gqabi District Municipality, Eastern Cape Province.

This section confirms a declaration of independence that archaeological heritage specialist, Ms Celeste Booth, does not have and will not have any vested interest (either business, financial, personal or other) in the proposed activity proceeding other than remuneration for work performed in terms of the Amendments to Environmental Impact Assessment Regulations, 2014 as amended.

Ms Celeste Booth further declares that she:

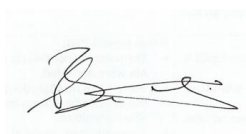
- will act as the independent Specialist in this application;
- will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- will declare that there are no circumstances that may compromise her objectivity in performing such work;
- has expertise in conducting environmental impact assessments, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- will comply with the Act, regulations and all other applicable legislation;
- will take into account, to the extent possible, the matters listed in regulation 8 of the regulations when preparing the application and any report relating to the application;
- has no, and will not engage in, conflicting interests in the undertaking of the activity;
- undertakes to disclose to the applicant and the competent authority all material information in her possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided

with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;

- will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the competent authority in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the competent authority may be attached to the report without further amendment to the report;
- will keep a register of all interested and affected parties that participated in a public participation process; and
- will provide the competent authority with access to all information at her disposal regarding the application, whether such information is favourable to the applicant or not
- confirms that all the particulars furnished by the in this form are true and correct;
- will perform all other obligations as expected from an environmental assessment practitioner in terms of the Regulations; and
- realises that a false declaration is an offence and is punishable in terms of section 24F of the Act.

SUMMARY OF SPECIALIST EXPERTISE

Ms Celeste Booth (BSc Honours: Archaeology) is an archaeologist who has had eighteen (18) years of full-time experience in Cultural Resource Management in the Eastern Cape Province and sections of the Northern Cape and Western Cape Provinces. Ms Booth has conducted several Archaeological Desktop Studies and Phase 1 Archaeological Impact Assessments within the Eastern Cape Province and in the Karoo region across the Eastern Cape, Northern Cape, KwaZulu Natal, and Western Cape Provinces.



EXECUTIVE SUMMARY

Purpose of the Study

The purpose of the study was to conduct a phase 1 archaeological and cultural heritage assessment for the proposed Blikana Project, Joe Gqabi District Municipality, Eastern Cape Province.

The survey was conducted to establish the range and importance of the exposed and *in situ* archaeological heritage material remains, sites and features; to establish the potential impact of the development; and to make recommendations to minimize possible damage to the archaeological heritage.

Brief Summary of Findings

Most of the proposed pipelines run past and through existing villages and residential settlements. Some of the villages are densely populated. Contemporary and historical formal and informal graves can be found within the residential homesteads and outside of demarcated residential homesteads. The formal graves include graves that have been built up and include headstones, some of these graves are fenced, especially those outside of demarcated residential homesteads. The informal graves include graves which are stone packed, some containing headstones with the name of the family painted or written on, whereas others comprise only an upright rock, some with the name of the family painted or written on.

Similarly, contemporary stone packed kraals and residential units as well as stone packed ruins can be found within the residential homesteads and outside of demarcated residential homesteads.

The survey was conducted during the traditional Initiation / Ulwaluko process. There was a marked area along the proposed CR 1 gravity main crossing to R393 pipeline on the hilltop that females may not cross as it is considered to bring bad luck or ill fortune upon the initiates.

The mountainous regions of this area from Lundean's / Lundin's Nek to Lady Grey, as well as across the Lesotho border are known to be rich in Bushman rock art paintings. One (1) rock shelter was identified along the proposed CR3 rising main pipeline route west of the area proposed for the Command Reservoir CR-3. The rock shelter has the potential to contain rock paintings, however, could not be investigated to confirm the presence of rock paintings.

No archaeological (i.e. stone artefacts, pottery, etc.) to confirm the presence of pre-colonial sites or presence on the landscape were identified. The areas surveyed were mostly along the available access routes, some of which were highly disturbed due to the construction of internal gravel roads and densely populated residential settlements. This does not confirm that archaeological materials do not occur along the route of the pipeline, only that none were observed on the surface. It is always possible that stone artefacts, historical artefacts, and unmarked human burials that occur between the surface and up to 1.5 m below ground may be exposed during the bush clearing and excavation phases of the construction phases.

Recommendations and Mitigation

No archaeological heritage resources were identified during the survey, therefore, considered as having a *low archaeological heritage significance*, by surface observation. This does not confirm that archaeological do not occur along the route of the pipeline, only that none were observed on the surface. It is always possible that stone artefacts, historical artefacts, and unmarked human burials that occur between the surface and up to 1.5 m below ground may be exposed during the bush clearing and excavation phases of the construction phases. The stone packed structures resembling historical kraals are considered as having a *low - medium heritage significance* and should not be negatively impacted during the course of the construction activities. The built environment structures are not considered of heritage significance, but it is unlikely that these structures will be impacted during the construction. The graves and cemeteries are considered of *high heritage significance*. The cultural landscape is considered as being of a *high heritage significance* considering the impacts the contemporary communities and the continuation of cultural and ritual practices within the area.

Development may proceed as planned however the following recommendations must be implemented prior to and during the course of the construction activities. Additional comments, recommendations and mitigation may be commented upon and requested from the Eastern Cape Provincial Heritage Resources Authority (ECPHRA).

The following recommendation must be implemented prior to the commencement of development:

1. Due to the extent of the of the area and difficulty in access to various areas not all areas could be physically surveyed. An archaeological heritage walkthrough must be conducted for the final layout of the project. The final layout of the project must include and inform on the laydown areas, constructions site areas, as well as the roads that would be required to access the currently inaccessible areas. The cultural heritage sites and the rock shelter that could hold potential rock art paintings can be appropriately identified and demarcated during this walk-through.

In addition, the following recommendations and mitigation measures must be considered and implemented prior to the commencement of development:

1. The stone packed structures / ruins are considered as having a *low - medium heritage significance* and should not be negatively impacted during the course of the construction activities.
2. All graves and cemeteries are considered as having a *high cultural heritage significance*. All graves must not be negatively impacted during the construction of the proposed pipeline and associated infrastructure (dams, WTW, and command reservoirs).
3. If it is necessary for graves to be relocated the correct procedures must be followed. The costs and process would be on the onus of the developer. The proper procedures and a rigorous public participation process would have to be followed before the graves may be exhumed, relocated and reburied.
4. The cultural landscape is considered as being of a *high heritage significance* considering vast number of graves and cemeteries within the area as well as living heritage areas such places where the initiation / Ulwaluko process occurs and structures such as cairns.

Local Tribal authorities and associated members, members of the community who will be directly affected by the construction of the pipeline, and well as members of the community who will not be directly affected, who reside in the villages surrounding the project area, must be consulted and included as part of the public participation process. Residents who do not reside within the project area may still have a spiritual connection to the project area.

5. If concentrations of pre-colonial archaeological and/or historical heritage material (such as below surface dense artefacts accumulations and associated material) and/or human remains (including graves and burials) are uncovered during construction, all work must cease immediately and be reported to the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) (043 745 0888) and/or the author of the report, so that systematic and professional investigation/excavation can be undertaken. Phase 2 mitigation in the form of test-pitting/sampling or systematic excavations and collections of the archaeological / heritage site may then be conducted to establish the contextual status of the sites and possibly remove the archaeological deposit before development activities continue.
6. A person or persons must be trained as a site monitor/s to report any archaeological sites found during the development. Construction managers/foremen and/or the

Environmental Control Officer (ECO) should be informed before construction starts on the possible types of heritage sites and cultural material they may encounter and the procedures to follow when they find sites.

7. A Chance Finds Protocol must be compiled and made readily available for all staff working during the construction phase of the project.

1 INTRODUCTION

1.1 Background Information (from the Background Information Document compiled by Abantu Environmental)

Project Description

- A dam on the Blikana river,
- Abstraction points (weirs),
- a 7.5 Ml/day Water Treatment Works (WTW)
- Command Reservoirs (CR) (CR1, CR2 and CR3),
- Rising and gravity mains pipelines as well as associated infrastructure

Evaluated Alternatives

| CATEGORY | ALTERNATIVE |
|--------------------------------------|---|
| Site and Route Alternatives | Alternative 1: Optimised routing and siting |
| Dam Site and Design Alternatives | Alternative 1: Instream (upstream) Alternative 2: Instream (downstream) |
| Pipeline Design Alternatives | <ul style="list-style-type: none"> ▪ Alternative 1: Hybrid ▪ Alternative 2: Underground ▪ Alternative 3: Aboveground |
| Technical & Operational Alternatives | No feasible and reasonable alternatives evaluated and assessed. |
| NO-GO Alternative | Status Quo |

The following preferred alternatives are recommended:

| CATEGORY | ALTERNATIVE |
|--------------------------------------|---|
| Site and Route Alternatives | Alternative 1: Optimised routing and siting |
| Dam Site and Design Alternatives | Alternative 1: Instream (upstream) Alternative 2: Instream (downstream) |
| Pipeline Design Alternatives | <ul style="list-style-type: none"> ▪ Alternative 1: Hybrid ▪ Alternative 2: Underground ▪ Alternative 3: Aboveground |
| Technical & Operational Alternatives | No feasible and reasonable alternatives evaluated and assessed. |
| NO-GO Alternative | Status Quo |

1.2 Applicant

Funder: Department of Water and Sanitation

Applicant: Joe Gqabi district municipality

1.3 Environmental Assessment Practitioner (EAP)

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2 SCOPE OF WORK AND TERMS OF REFERENCE

The purpose of the study was to conduct an archaeological and cultural heritage assessment for the proposed Blikana Project, Joe Gqabi District Municipality, Eastern Cape Province.

The survey was conducted to:

- Identify and map possible heritage sites and occurrences using published and database resources;

- Provide a description of the archaeology and cultural heritage of the site and identify and map any sites of archaeology or cultural significance that may be impacted by the proposed project;
- Assess the sensitivity and conservation significance of any sites of archaeological or cultural heritage significance affected by the proposed project;
- Identify and assess the significance of the potential impacts of the proposed project on archaeological and cultural heritage;
- Make recommendations on the protection and maintenance of any significant cultural heritage and/or archaeological sites that may occur on site;
- Identify practicable mitigation measures to reduce negative impacts on the archaeological resources and indicate how these can be incorporated into the construction and management of the proposed project;
- Provide guidance for the requirement of any permits from the Eastern Cape Provincial Heritage Resources Authority (ECPHRA) that might become necessary.

Archaeological and historical material remains, features, and sites were evaluated and assessed based on the following points:

- Type of site;
- Location and environmental surrounds;
- Site category;
- Context and condition;
- Estimated size and depth of deposit;
- Cultural affinities;
- Record site content;
- Record basic information of finds;
- Estimate relative age of sites from cultural material and other information;
- Record and describe graves, graveyards, and informal burials;
- Assess the importance and significance of material remains, features, and sites; and
- Significance ratings based on local to international.

3 HERITAGE LEGISLATIVE AND POLICY FRAMEWORK

The phase 1 archaeological and cultural impact assessment was conducted as a requirement of the ECPHRA (Eastern Cape Provincial Heritage Authority) and National Heritage Resources Act 25 of 1999, Section 38 (1):

38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorized as –

(a) the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;

(b) the construction of a bridge or similar structure exceeding 50 m in length;

- (c) any development or other activity which will change the character of the site**
– (i) exceeding 5 000 m² in extent, or
 (d) the re-zoning of a site exceeding 10 000 m² in extent,

This report follows the minimum standard guidelines required by the South African Heritage Resources Agency (SAHRA) and the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) for compiling a full Phase 1 Archaeological Impact Assessment (AIA). The Eastern Cape Provincial Heritage Resources (ECPHRA) has been the competent authority in the Eastern Cape Province since 2012. All heritage reports must be submitted to the Eastern Cape Provincial Heritage Resources Authority (ECPHRA) for comment and uploaded to the South African Heritage Information System (SAHRIS) database.

4. ARCHAEOLOGICAL BACKGROUND

Little systematic archaeological research has been conducted within the immediate area of the proposed development. Most archaeological research that has been conducted in the wider regions of the north-eastern Cape and Lesotho.

Several archaeological and heritage impact assessments have been conducted within the wider region. These impact assessments have identified several Middle, and Later Stone Age artefact scatters and sites as well as evidence of Iron Age agropastoralist occupation and/or interaction by the presence of broken earthenware pot sherds and associated material culture and settlement patterns.

4.1 Early Stone Age (ESA) - 1.5 million to 250 000 years ago

The Early Stone Age from between 1.5 million and 250 000 years ago refers to the earliest that *Homo sapiens sapiens* predecessors began making stone tools. The earliest stone tool industry was referred to as the Olduvai Industry originating from stone artefacts recorded at Olduvai Gorge, Tanzania. The Acheulian Industry, the predominant southern African Early Stone Age Industry, replaced the Olduvai Industry approximately 1.5 million years ago, is attested to in diverse environments and over wide geographical areas. The hallmark of the Acheulian Industry is its large cutting tools (LCTs or bifaces), primarily handaxes and cleavers. Bifaces emerged in East Africa more than 1.5 million years ago (mya) but have been reported from a wide range of areas, from South Africa to northern Europe and from India to the Iberian coast. The end products were similar across the geographical and chronological distribution of the Acheulian techno-complex: large flakes that were suitable in size and morphology for the production of handaxes and cleavers perfectly suited to the available raw materials (Sharon 2009).

One of the most well-known Early Stone Age sites in southern Africa is Amanzi Springs (Deacon 1970), situated about 10 km north-east of Uitenhage and 45 km south east of the WEF site. The site is situated on a north-facing hill overlooking the Coega River. The earliest reference to the spring was made by an early traveller, Barrow (1801). FitzPatrick

first reported stone artefacts in the area in 1924. Ray Inskeep (Inskeep 1965) conducted a small-scale excavation of the site in 1963. It was only in 1964 and 1965 that large scale excavations were conducted by Hilary Deacon. In a series of spring deposits, a large number of stone tools were found *in situ* to a depth of 3-4 m. Wood and seed material preserved remarkably very well within the spring deposits, and possibly date to between 800 000 to 250 000 years old.

Other Early Stone Age sites that contained preserved bone and plant material include Wonderwerk Cave in the Northern Province, near Kimberly and Montagu Cave in the Western Cape, near the small town of Montagu (Mitchell 2007). Early Stone Age sites have also been reported in the foothills of the Sneeuwege Mountains (in Prins 2011).

The locations of Early Stone Age sites are biased by several factors, the change in land surface, so that the evidence of coastal exploitation is absent, the survival of Early Stone Age material either *in situ* or sealed within Pleistocene deposits is limited by soil and water activities and numerous processes in environmental change over time and research interests of professional archaeologists. Early Stone Age materials are the earliest evidence for human ancestors occupying the Transkei and Ciskei regions and typically occur on floodplains of perennial rivers and along drainage lines and water courses.

Museum collections have handaxes mixed collections and other collections attributed to the Early Stone Age. Sites of convincing Early Stone Age date are indicated in most areas of the Ciskei and are present in the Transkei districts of Kentani, Butterworth, Nqamakwe, St. Mark's, Engcobo, Matatiele, Mount Frere, Mount Ayliff, Bizana, Idutywa, Lusikisiki, Mount Currie and Umtata (Derricourt 1977).

4.2 Middle Stone Age (MSA) – 250 000 – 30 000 years ago

The Middle Stone Age spans a period from 250 000 - 30 000 years ago and focuses on the emergence of modern humans through the change in technology, behaviour, physical appearance, art and symbolism. Various stone artefact industries occur during this time period, although less is known about the time prior to 120 000 years ago, extensive systemic archaeological research is being conducted on sites across southern Africa dating within the last 120 000 years (Thompson & Marean 2008). The large handaxes and cleavers were replaced by smaller stone artefacts called the Middle Stone Age flake and blade industries. Surface scatters of these flake and blade industries occur widespread across southern Africa although rarely with any associated botanical and faunal remains. It is also common for these stone artefacts to be found between the surface and approximately 50-80 cm below ground. Fossil bone may in rare cases be associated with Middle Stone Age occurrences (Gess 1969). These stone artefacts, like the Earlier Stone Age handaxes are usually observed in secondary context with no other associated archaeological material.

The Middle Stone Age is distinguished from the Early Stone Age by the smaller-sized and distinctly different stone artefacts and *chaîne opératoire* (method) used in manufacture, the introduction of other types of artefacts and evidence of symbolic behaviour. The prepared core technique was used for the manufacture of the stone artefacts which display a characteristic faceted striking platform and includes mainly unifacial and bifacial flake blades and points. The Howiesons Poort Industry (80 000 - 55 000 years ago) is distinguished from the other Middle Stone Age stone artefacts: the size of tools is generally smaller, the range of raw materials include finer-grained rocks such as silcrete, chalcedony, quartz and hornfels, and include segments, backed blades and trapezoids in the stone toolkit which were sometimes hafted (set or glued) onto handles. In addition to stone artefacts, bone was worked into points, possibly hafted, and used as tools for hunting (Deacon & Deacon 1999).

Other types of artefacts that have been encountered in archaeological excavations include tick shell (*Nassarius kraussianus*) beads, the rim pieces of ostrich eggshell (OES) water flasks, ochre-stained pieces of ostrich eggshell and engraved and scratched ochre pieces, as well as the collection of materials for purely aesthetic reasons. Although Middle Stone Age artefacts occur throughout the Eastern Cape, the most well-known Middle Stone Age sites include the type-site for the Howiesons Poort stone tool industry, Howiesons Poort (HP) rock shelter, situated close to Grahamstown, and Klasies River Mouth Cave (KRM), situated along the Tsitsikamma coast. Middle Stone Age sites are located both at the coast and in the interior across southern Africa.

Systematic archaeological research has been conducted on several sites yielding evidence of Middle Stone Age occupation occurring within the foothills of the Drakensburg and extending into Lesotho and KwaZulu Natal. Strathalan Cave B situated about 10 km north-east of Maclear and about 100 - 110 km east of the proposed development area, shows evidence of human behaviour between 29 000 and 22 000 years ago. This period highlights the final years of the Middle Stone Age and is considered transient between the Middle and Late Stone Ages. Excavations at the site revealed that the small cave may have been used as a camp site during cold winter nights and that the people occupying the cave behaved like Late Stone Age hunter-gatherers in some respects, but not all (Opperman, 1996; Opperman & Heydenrych 1990). During 1978 an archaeological research programme was initiated in the north-eastern Cape to gain information on the end Pleistocene and Holocene hunter-gatherer populations and the palaeoecology along a gradient transecting the extension of the Drakensberg escarpment into the Cape. Excavations were conducted at a series of sites in the Dordrecht-Elliot-Ugie-Barkley East area which was usually well-known for its painted sites. The only excavations that were previously carried were at Belleview (Drakensburg), Moshebi's Shelter and Sehonghong (in eastern Lesotho) and Merino Walk within the Barkley East region. Below the escarpment two rock shelters were excavated at Bonawe and Te Vrede (Elliot and Ugie Districts) above the escarpment excavations have been undertaken in the Barkley East District at Colwinton, Prospect, Wartrail and Ravenscraig. In addition to this an excavation has been conducted at a site on the farm Grassridge near Dordrecht. All sites included

end-Pleistocene and Holocene material expect Wartrail (entirely Holocene) and Grassridge (Earlier late Pleistocene occupation). Additional sites that also contain late / terminal Pleistocene and Holocene deposits in the eastern highlands of South Africa and Lesotho include Rose Cottage Cave and Melikane, Ha Soloja Shelter does not show evidence of any Late Stone Age occupation (Plug 1996).

Several archaeological research projects are currently ongoing within the wider former Transkei and north-eastern Cape / southern Drakensburg region.

Scatters of Middle Stone Age stone artefacts are also known to occur within the region of the Eastern Cape Highlands where they occur along minor and major river courses in exposed and disturbed areas such as quarries, erosion dongas, gravel farm roads and 'manmade' dams.

4.3 Later Stone Age (LSA) – 30 000 years ago – recent (100 years ago)

The Later Stone Age (LSA) spans the period from about 20 000 years ago until the colonial era, although some communities continue making stone tools today. The period between 30 000 and 20 000 years ago is referred to as the transition from the Middle Stone Age to Later Stone Age; generally, there is a lack of crucial sites and evidence that represent this change, however, several sites in the eastern Cape Highlands, in eastern Lesotho and the Drakensburg in KwaZulu Natal have been dated to this time period. By the time of the Later Stone Age the genus *Homo*, in southern Africa, had developed into *Homo sapiens*, and in Europe, had already replaced *Homo neanderthalensis*.

The Later Stone Age is marked by a series of technological innovations, new tools and artefacts, the development of economic, political and social systems, and core symbolic beliefs and rituals. The stone toolkits changed over time according to time-specific needs and raw material availability, from smaller microlithic Robberg (20/18 000-14 000 ya), Wilton (8 000-the last 500 years) Industries and in between, the larger Albany/Oakhurst (14 000-8 000ya) and the Kabeljous (4 500-the last 500 years) Industries. Bored stones were used as part of digging sticks, grooved stones for sharpening and grinding, and stone tools fixed to handles with mastic also become more common. Fishing equipment such as hooks, gorges and sinkers also appear within archaeological excavations. Polished bone tools such as eyed needles, awls, linkshafts and arrowheads also become a more common occurrence. Most importantly bows and arrows revolutionized the hunting economy. It was only within the last 2 000 years that earthenware pottery was introduced, before then tortoiseshell bowls were used for cooking and ostrich eggshell (OES) flasks were used for storing water. Decorative items like ostrich eggshell and marine/fresh water shell beads and pendants were made.

Hunting and gathering made up the economic way of life of these communities; therefore, they are normally referred to as hunter-gatherers. Hunter-gatherers hunted both small and large game and gathered edible plantfoods from the veld. For those that lived at or

close to the coast, marine shellfish and seals and other edible marine resources were available for gathering. The political system was mainly egalitarian, and socially, hunter-gatherers lived in bands of up to twenty people during the scarce resource availability dispersal seasons and aggregated according to kinship relations during the abundant resource availability seasons. Symbolic beliefs and rituals are evidenced by the deliberate burial of the dead and in the rock art paintings and engravings scattered across the southern African landscape.

The majority of hunter-gatherer archaeological sites found usually date from the past 10 000 years where San hunter-gatherers inhabited the landscape living in rock shelters and caves as well as on the open landscape. These latter sites are difficult to find because they are in the open veld and often covered by vegetation and sand. Sometimes these sites are only represented by a few stone tools and fragments of bone. The preservation of these sites is poor and it is not always possible to date them (Deacon and Deacon 1999). Caves and rock shelters, however, in most cases, provide a more substantial preservation record of pre-colonial human occupation.

Later Stone Age sites occur both at the coast (caves, rock shelters, open sites and shell middens) and in the interior (caves, rock shelters and open sites) across southern Africa. There are more than a few significant Later Stone Age sites in the Eastern Cape. The most popular are the type-sites for the above-mentioned stone artefact industries, namely Wilton (for the Wilton Industry), Melkhoutboom (for the Albany Industry), both rock shelters situated to the west of Grahamstown, and Kabeljous Rock Shelter (for the Kabeljous Industry) situated just north of Jeffreys Bay. Caves and rock shelters that were occupied by the San during the Later Stone Age sometimes contain numerous paintings along the walls.

Several cave and rock shelter sites have been recorded into the north-eastern Cape and the foothills of the southern Drakensberg. Several of the sites mentioned in the Middle Stone Age section show evidence of Later Stone Age occupation. Later Stone Age deposits dating from the terminal Pleistocene to 100BP include Rose Cottage Cave (eastern Free State) and Melikane, Sehonghong and Moshebi's Shelter in eastern Lesotho. In the foothills of the Drakensberg recent Later Stone Age assemblages have been documented in the Phuthiatsana-ea-Thaba Basin and include 17 large rock shelters, 32 small rock shelters and cliff edge, 8 large rocks and 8 open sites. Later Stone Age assemblages have also been documented at Mhlwazini Cave and Collingham Shelter (Plug 1996). Colwinton's formal stone tool assemblage was dominated by the scrapers which is consistent with a majority of Later Stone Age assemblages in southern Africa. Potsherds and bone fish hooks were also recorded at the site as well as at Belleview and Driel (Opperman 1982). Strathalan Cave B situated about 10 km north-east of Maclear shows evidence of human behaviour between 29 000 and 22 000 years ago. However, radiocarbon dating indicates a hiatus of 10 000 years between the final Middle Stone Age date and first Later Stone Age occupation of the adjacent Strathalan Cave A. Ravenscraig was noted for the occurrence of chalcedony bladelets and stone artefacts resembling the Robberg Industry

of the southern and eastern Cape. The lowest stratigraphic layer at Colwinton contained stone artefacts resembling those of the Albany Industry of the southern and eastern Cape (Opperman 1982).

According to Derricourt (1977) open Later Stone Age sites in the Transkei and Ciskei are mostly located close to water regardless of whether it may be seasonal or perennial and water courses and notes that lydianite (indurated shale / hornfels) is predominant as a raw material. He also notes that it is possible that Later Stone Age open sites may be distinguished by those containing pottery and those without.

4.4 Last 2 000 years – Khoekhoen Pastoralism

Until 2 000 years ago, hunter-gatherer communities traded, exchanged goods, encountered and interacted with other hunter-gatherer communities. From about 2 000 years ago the social dynamics of the southern African landscape started changing with the immigration of two 'other' groups of people, different in physique, political, economic and social systems, beliefs and rituals. One of these groups, the Khoekhoen pastoralists or herders entered southern Africa with domestic animals, namely fat-tailed sheep and goats, travelling through the south towards the coast. Khoekhoen pastoralist sites are often found close to the banks of large streams and rivers. They also introduced thin-walled pottery common in the interior and along the coastal regions of southern Africa. Their economic systems were directed by the accumulation of wealth in domestic stock numbers and their political make-up was more hierarchical than that of the hunter-gatherers.

The most significant Khoekhoen pastoralist sites in the Eastern Cape include Scott's Cave near Patensie (Deacon 1967), Goedgeloof shell midden along the St. Francis coast (Binneman 2007) and Oakleigh rock shelter near Queenstown (Derricourt 1977). Often, these archaeological sites are found close to the banks of large streams and rivers. It is much more difficult to locate Khoekhoen open sites, owing to their settlement pattern and lack of stone artefacts, makes evidence of occupation almost 'invisible'.

Pre-agriculturalist pottery have been documented at some of the sites mentioned above. Pottery within the wider region of the proposed development area, from Swaziland to the north-eastern Cape, dates between 2 100 and 2 200 years and could possibly be earlier, predating the arrival of the of the agriculturalists by 400 years. No sheep remains have been found in association with the pottery which is stylistically different from those of the later agriculturalists (Iron Age populations) and a mean thickness of 7-8 mm Pottery has been documented at Driel Shelter, Clarke's Shelter and Mhlwazini Cave in the northern Drakensberg with dates ranging between of $2\ 160 \pm 50\text{BP}$ and $1\ 775 \pm 40\text{BP}$; at Collingham Shelter and Good Hope Shelter with dates ranging between $2\ 160\ \text{BP}$ and $1\ 770\ \text{BP}$; and at Moshebi's Shelter in eastern Lesotho with a date of $2\ 180 \pm 45\text{BP}$. In the Barkley East district, the dates for the pottery documented at Colwinton Shelter and Bonawe Shelter in the north-eastern Cape, Barkley East District, range between $2\ 250 \pm 80\text{BP}$ and $920 \pm 50\text{BP}$ (Mazel 1992).

4.5 Last 2 000 Years - The Iron Age

The Nguni-speaking agropastoralists or 'first-farming communities' or Iron Age communities entered southern Africa along the east coast within the last 2 000 years. They owned domestic stock, namely goats, sheep and cattle. Their pottery was different to that of the Khoekhoe, in the shape, thickness, heavy decoration and variety of the vessels. First farming communities lived a relatively sedentary way of life, they planted sorghum and millet, and were therefore limited to settle in the summer rainfall areas. In addition, first farming communities possessed the skill of metal working, having the ability to mine and work iron, copper, tin and even gold. Their economic systems were also based on the accumulation of wealth through owner-ship and their political organization was slightly more hierarchical than that of the Khoekhoen.

Much research has been conducted on the Iron Age (IA) across southern Africa, therefore resulting in well-established chronological and typological frameworks and settlement and economic patterns for the Iron Age sequence (Huffman 2007). The Iron Age sequence is based on ceramic phases determined by vessel profile and decoration motif and placement.

According to Huffman (2007) an eastern migration stream, known as the Chifumbaze Complex spread southwards from East Africa south into southern Africa during the period of about AD 200–300 where several KwaZulu-Natal and north-Eastern Cape sites were occupied. The Early Iron Age sites in the Eastern Cape dates to between circa AD 600 to AD 900 and can be divided into the following ceramic facies (Maggs 1989; Huffman 2007):

- Msuluzi (AD 500-700);
- Ndondondwane (AD 700 – 800);
- Ntshekane (AD 800 – 900).

Thicker and decorated pottery sherds, kraals, possible remains of domesticated animals, upper and lower grindstones, storage pits, metal and iron implements are associated with identifying Early Iron Age sites. The sites are generally large settlements, but the archaeological visibility may in most cases be difficult owing to the organic nature of the homesteads. Additional evidence of these agropastoralist groups derives from rock paintings of cattle painted by hunter-gatherer groups who encountered or interacted with these communities. The bones of cattle and sheep excavated at Oakleigh Shelter near Queenstown may be an indication of possible stock theft (Derricourt 1977). The Early Iron Age (EIA) first-farming communities during the first millennium AD generally preferred to occupy river valleys within the eastern half of southern Africa owing to the summer-rainfall climate that was conducive for growing millet and sorghum.

In comparison to other areas containing Iron Age sites only a small amount of Iron Age research has been conducted in the Eastern Cape thus far. Earlier investigations into the Early Iron Age in the Transkei and Ciskei includes work at Buffalo River Mouth (Wells 1934; Laidler 1935), at Chalumna River Mouth (Derricourt 1977) and additional research by Feely

(1987) and Prins (1989). Early Iron Age Sites (EIA) sites also include Kulubele situated in the Great Kei River Valley near Khomga (Binneman 1996), Ntsitsana situated in the interior Transkei, 70 km west of the coast, along the Mzimvubu River (Prins & Granger 1993), and Canasta Place situated on the west bank of the Buffalo (Qonce) River (Nogwaza 1994). Along the coast, near Coffee Bay, Early Iron Age sites have been dated from AD 670 and includes the sites of Mpame and Mqanduli. Early Iron Age pottery scatters have been documented along several area of the Wild Coast coastline including Zig-Zag Cave near Port St Johns (Derricourt 1977).

Hilltop settlement is mainly associated with Later Iron Age (LIA) settlement patterns that occurred during the second millennium AD. The Later Iron Age communities later moved from settlement in river valleys to the hilltops. Later Iron Age settlements have been formally recorded by the Albany Museum With the exception of the Tembu, stone buildings which characterizes the Iron Age sites of Sotho areas, is absent in the Transkei and Ciskei, and a pattern of some mobility without, it is presumed, a stone working technology of significance, makes the allocation of sites a major problem (Derricourt 1973).

Huffman's (2004) ceramic sequence among the Nguni groups contains three facies:

- Blackburn (AD 1 050 – 1 300): along north and south coasts of KwaZulu Natal;
- Moor Park (AD 1 300 – 1 700): first recorded in Estcourt Midlands then along Transkei coast where it was called Umgazana Ware. Appears south of the Mtamvuma River and it is suggested that it was the beginning of the division between southern and northern Nguni people and probably continued into the nineteenth century;
- Nqabeni (AD 1 700 – 1 850): style centres on KwaZulu Natal;

4.6 Unmarked Burials and Exposed Human Remains

It is difficult to detect the presence of archaeological human remains on the landscape as these burials, in most cases, are not marked at the surface. Human remains are usually observed when they are exposed through erosion or construction activities for development. Several human remains have been rescued eroding out of the dunes along this coastline. In some instances, packed stones or rocks may indicate the presence of informal pre-colonial burials.

The Albany Museum Database holds records of human remains that have been exposed and collected for conservation and curation within the wider region especially along the coastal areas. Cultural Resource Management practitioners whilst conducting archaeological heritage impact assessments have also recorded formal historical and contemporary cemeteries and informal burials within the wider region.

4.7 Rock Art (Paintings and Engravings)

Rock art is generally associated with the Later Stone Age period mostly dating from the last 5000 years to the historical period. It is difficult to accurately date the rock art without destructive practices. The southern African landscape is exceptionally rich in the distribution of rock art which is determined between paintings and engravings. Rock paintings occur on the walls of caves and rock shelters across southern Africa and are prolific in the Southern Drakensberg, north-eastern Cape extending the entire Drakensberg range into KwaZulu-Natal and Lesotho. Rock engravings are limited to the Karoo and Northern Cape Regions and do not generally occur within the north-eastern Cape region and Transkei region.

Rock art research within the Southern Drakensberg has been conducted by several researchers and students from the Rock Art Research Institute, University of the Witwatersrand, over a period of 25 years, with a well-established database of site from Maclear, Tsolo, Barkly East, Ugie, Dordrecht and the wider region and extent of the Drakensberg range and Maluti Mountains. The South African Rock Art Database established by the Rock Art Research Institute is a useful source for rock art site information across southern Africa.

5 DESCRIPTION OF THE PROPERTY

5.1 Location data

The area for the proposed Blikana project is situated between Palmietfontein in the north and Rock Cliff in the south and west of the R393 regional road and the Lesotho border.

5.2 Topographic Maps

1:50 000 Topographic Maps:
3027AD DULCIES NEK (2013)
3027BC PALMIET FONTEIN (2013)
3027CB STERKSPRUIT (2013)
3027DA BLIKANA (2013)

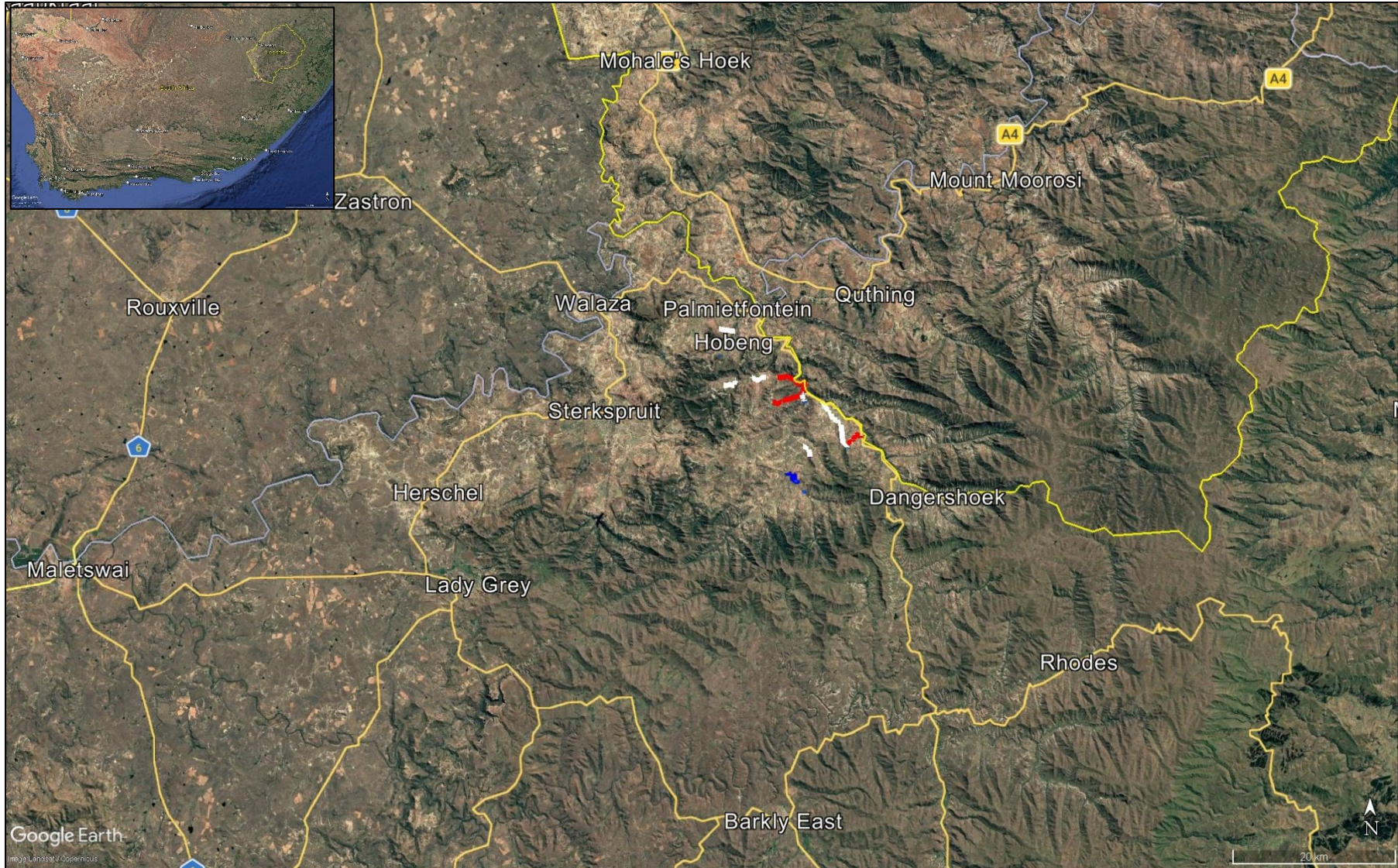


Figure 1. Google Earth generated map of the location of the proposed Blikana Project, Joe Gqabi District Municipality, Eastern Cape Province showing the surrounding areas.

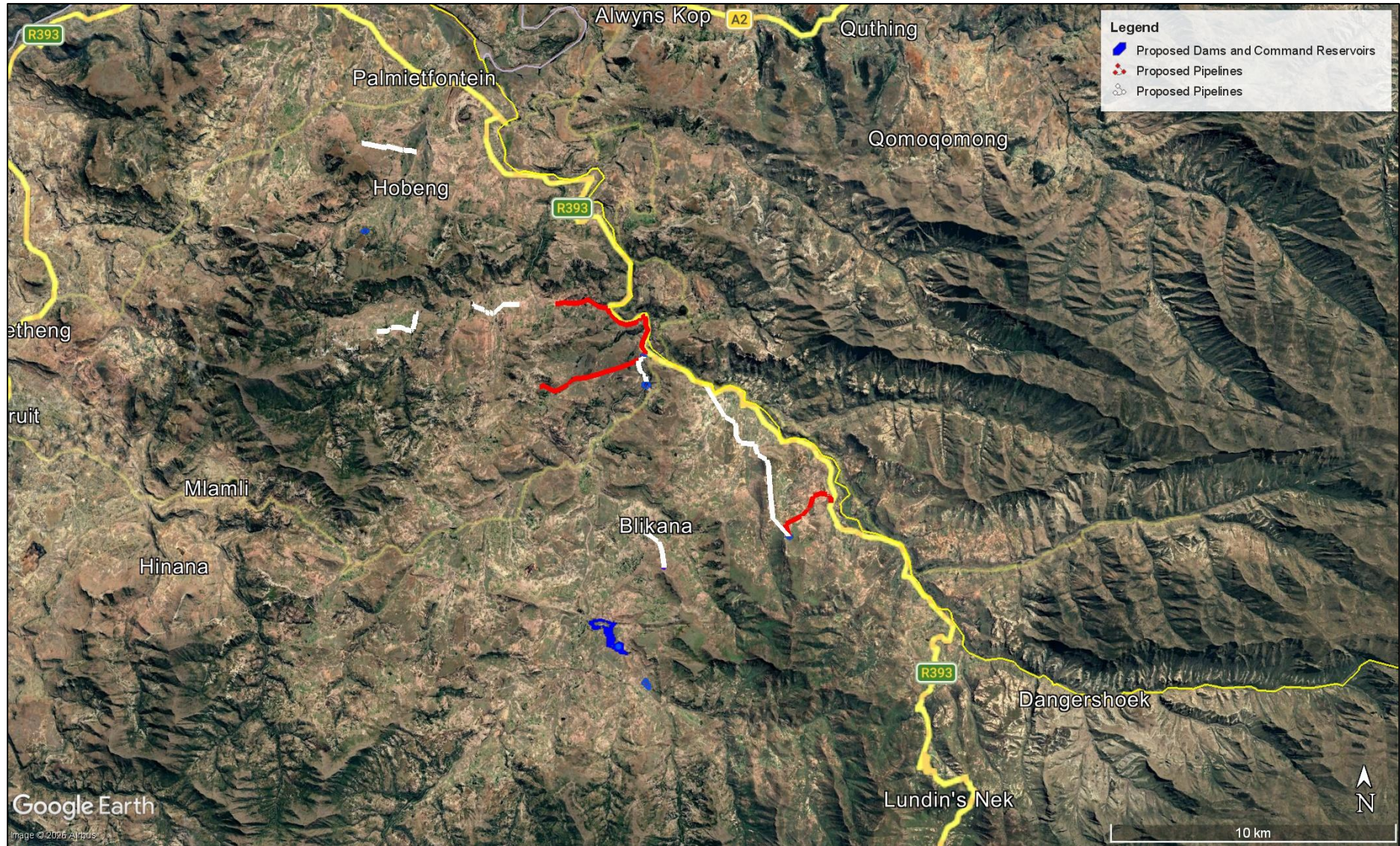


Figure 2. Google Earth generated map of the location of the proposed Blikana Project, Joe Gqabi District Municipality, Eastern Cape Province.

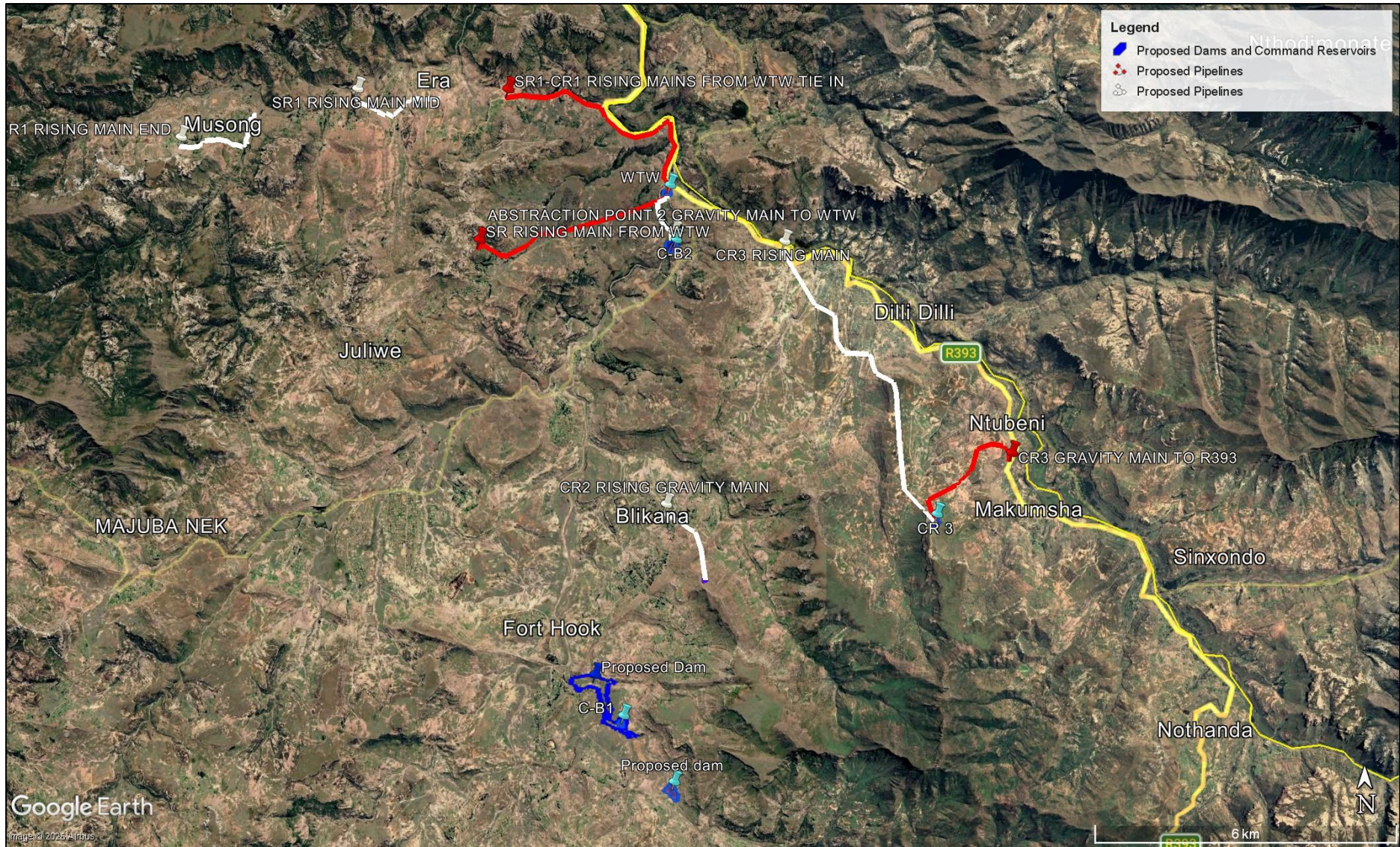


Figure 3. Google Earth generated map of the location of the proposed Blikana Project, Joe Gqabi District Municipality, Eastern Cape Province.

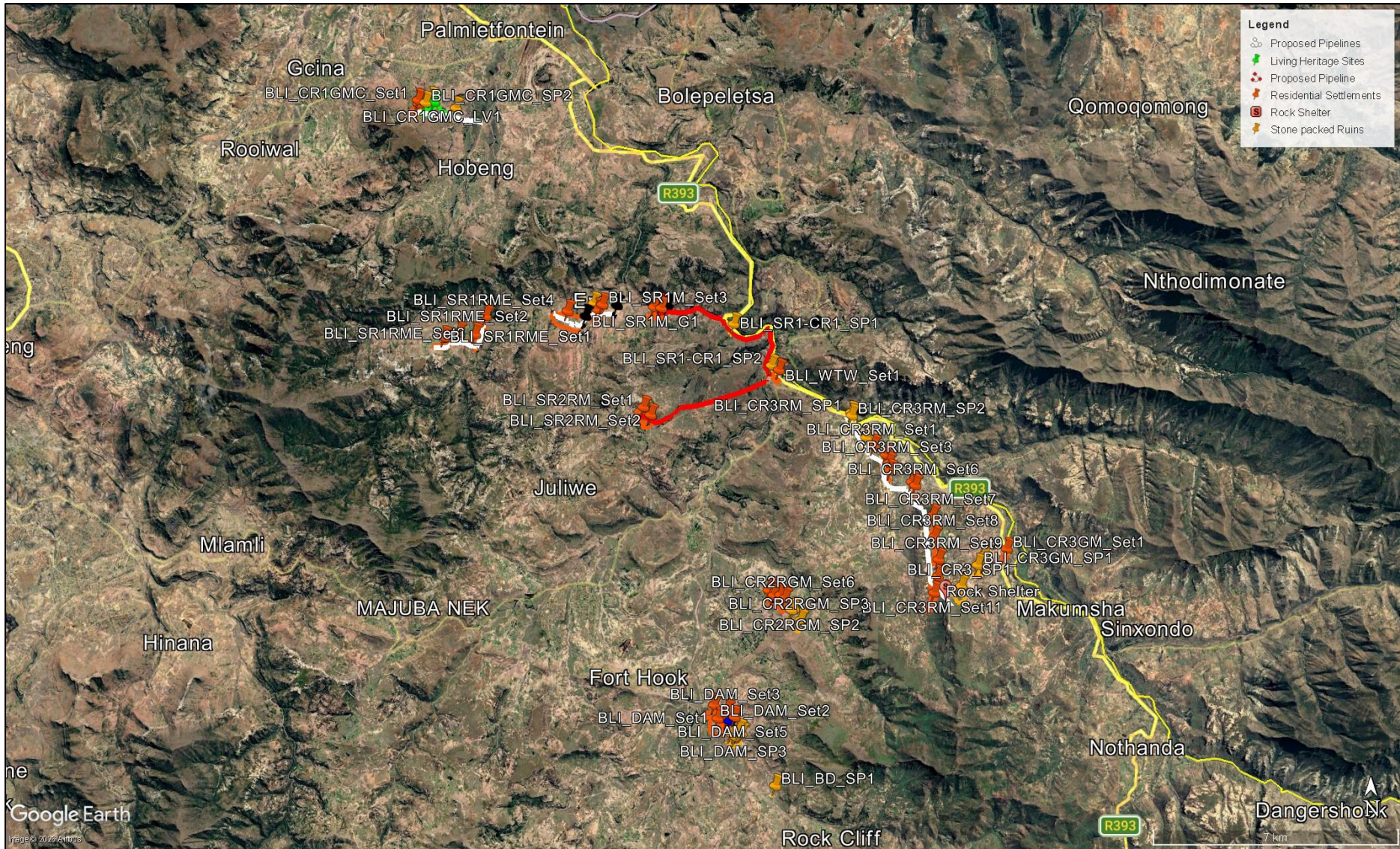


Figure 4. Google Earth generated map of the location of the proposed Blikana Project, Joe Gqabi District Municipality, Eastern Cape Province, showing the sites identified.

6 ARCHAEOLOGICAL AND CULTURAL HERITAGE INVESTIGATION

6.1 Methodology

A literature review was conducted prior to the field survey to establish the potential archaeological and cultural heritage sites that may be encountered within the proposed area and provide insight into the archaeological background of the wider region. An archaeological background information chapter has been included in this report.

The area was surveyed on foot by the author of the report and security escorts. GPS coordinates, the survey tracks, and sites were plotted using the Avenza Maps application. Due to the extent of the area and difficulty in access to various areas not all areas could be physically surveyed. However, the areas surveyed allowed for an indication on the types of sites that would be encountered along and within the areas that could not be accessed.

6.2 Results of the Archaeological Investigation

As previously stated, the vastness of the region and challenges in accessing certain locations made it impossible to physically survey every area. Nonetheless, the sections that were surveyed provided valuable insights into the types of sites likely present within areas that could not be reached.

The general landscape for the proposed Blikana Project is mountainous and rural (Figures 23 – 29). The Witteberg, also known as the Witteberge, is a mountain range in South Africa located just off the southwest corner of Lesotho. Reaching elevations of up to 2,408 metres, it extends approximately 60 km from Lundean's Nek / Lundin's Neck in the east to Lady Grey in the west. The range has lent its name to the Witteberg Series, which represents the highest fossil-bearing sequence within the Cape System of sedimentary rocks found in South Africa. The Witteberge are a series of outlying mountains of the Drakensberg and there is a similar majesty and expansiveness to this pass. Lundean's / Lundin's Nek Pass is situated south of the project area on the R393 takes one up to the peak of the 'white mountains' as the Witteberg is known. From the summit one stares out over the Maloti Mountains down into the valley through onto the Telle River. It is easily one of the more scenic passes in South Africa and, because of its remoteness, unspoilt in terms of having to share it with others. The scenery on the pass, which lies at the southern tip of Lesotho, is incredible.

Most of the proposed pipelines run past and through existing villages and residential settlements. Some of the villages are densely populated. Contemporary and historical formal and informal graves can be found within the residential homesteads and outside of demarcated residential homesteads (Figures 30 – 38). The formal graves include graves that have been built up and include headstones, some of these graves are fenced, especially those outside of demarcated residential homesteads. The informal graves include graves which are stone packed, some containing headstones with the name of the

family painted or written on, whereas others comprise only an upright rock, some with the name of the family painted or written on.

Similarly, contemporary stone packed kraals and residential units as well as stone packed ruins can be found within the residential homesteads and outside of demarcated residential homesteads (Figures 39 – 44).

The survey was conducted during the traditional Initiation / Ulwaluko process. There was a marked area along the proposed CR 1 gravity main crossing to R393 pipeline on the hilltop that females may not cross (Figure 45) as it is considered to bring bad luck or ill fortune upon the initiates.

There should be no impacts to the current initiation schools, which will have been destroyed by the time the pipeline is constructed. The seasons for the process should be noted during the construction process. The initiation schools occur during the winter season, June / July and the summer season November / December. Therefore, it is important to include the community members as part of the public participation process and keep open lines of communication between the developer, construction companies, environmental impact assessment practitioners to avoid any conflict that may arise due to the lack of inclusiveness and communication with the local communities within the immediate and adjacent villages.

The mountainous regions of this area from Lundean's / Lundin's Nek to Lady Grey, as well as across the Lesotho border are known to be rich in Bushman rock art paintings. One (1) rock shelter was identified along the proposed CR3 rising main pipeline route west of the area proposed for the Command Reservoir CR-3 (Figures 46 – 47). The rock shelter has the potential to contain rock paintings, however, could not be investigated to confirm the presence of rock paintings.

No archaeological (i.e. stone artefacts, pottery, etc.) to confirm the presence of pre-colonial sites or presence on the landscape were identified. The areas surveyed were mostly along the available access routes, some of which were highly disturbed due to the construction of internal gravel roads and densely populated residential settlements. This does not confirm that archaeological materials do not occur along the route of the pipeline, only that none were observed on the surface. It is always possible that stone artefacts, historical artefacts, and unmarked human burials that occur between the surface and up to 1.5 m below ground may be exposed during the bush clearing and excavation phases of the construction phases.

A description of sites along each of the proposed pipeline, command reservoir, and dam areas as well mitigation measures will be given below. Please see relevant section 12 of this report for full recommendations and mitigation measures.

6.2.1 CR1 Gravity Main Crossing to the R393 (CR1GMC)

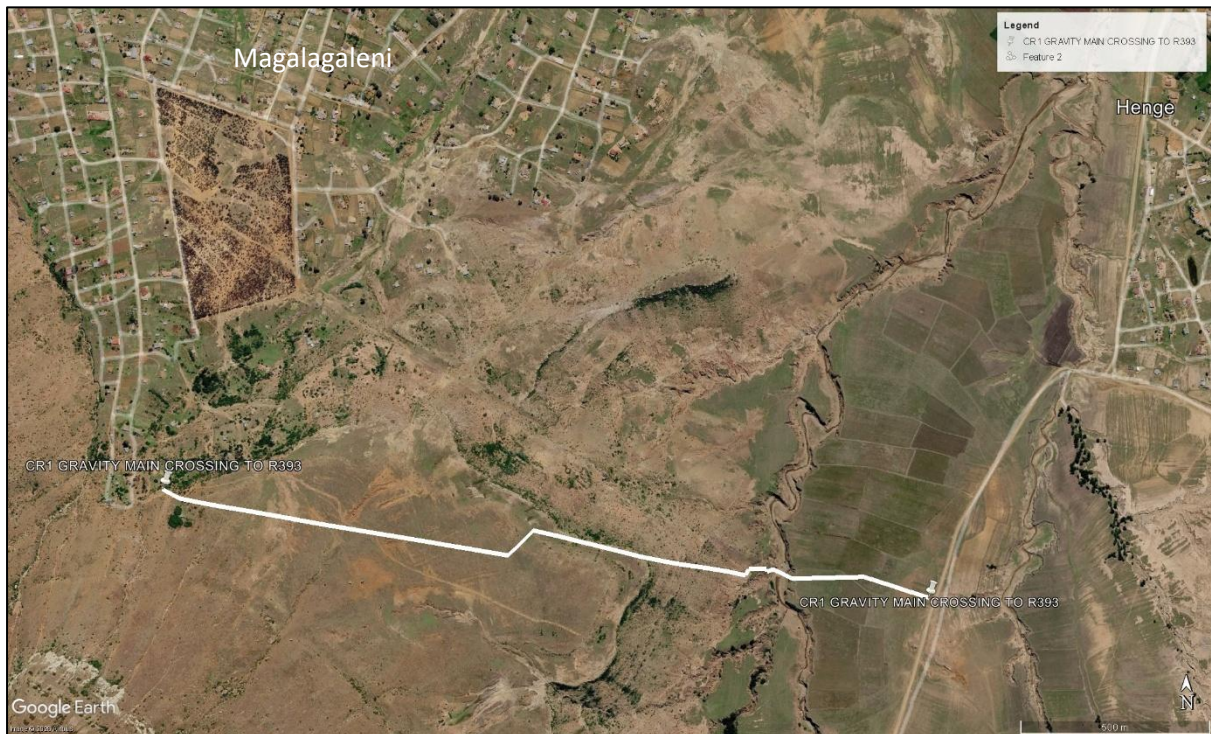


Figure 5. View of the proposed pipeline CR1 Gravity Main Crossing to the R393 (CR1GMC).

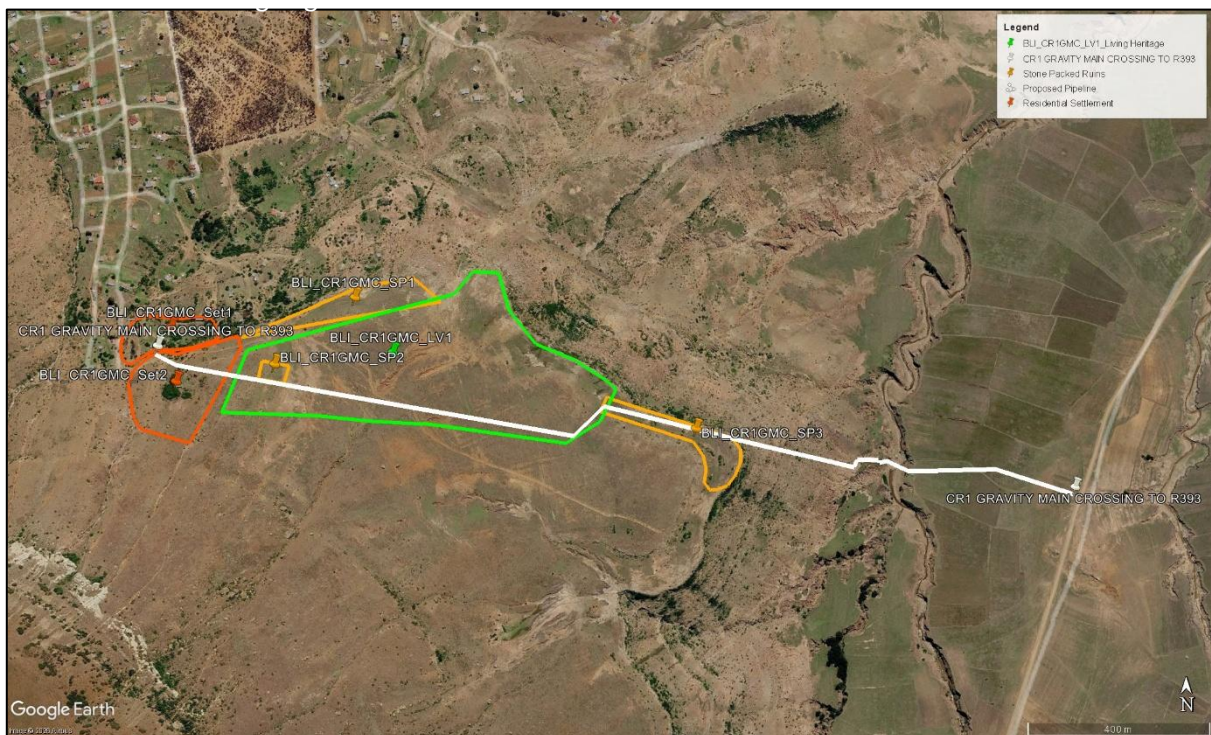


Figure 6. View of the sites identified along the proposed pipeline CR1 Gravity Main Crossing to the R393 (CR1GMC).

Figure 5 shows the proposed CR1 Gravity Main Crossing to the R393 (CR1GMC) pipeline that runs south of Magalagaleni Village over the hilltop and east down to the road near Henge Village for 2 km. The western section the proposed pipeline runs down the hill through cultivated agricultural lands.

Figure 6 shows the sites identified along the proposed pipeline route. Two (2) contemporary residential settlements comprising both stone packed kraals and stone packed ruins (BLI_CR1GMC_Set1 and BLI_CR1GMC_Set2) are situated west and south of the eastern point of the pipeline. The living heritage area (BLI_CR1GMC_LV1), as described above, where Initiation / Ulwaluko process was being undertaken during the time of the survey has been demarcated on the hilltop.

Three (3) areas containing stone packed ruins (kraals) (BLI_CR1GMC_SP1 - BLI_CR1GMC_SP1) have been identified on the hilltop. Sites BLI_CR1GMC_SP2 and BLI_CR1GMC_SP3 occur directly along the proposed route for the pipeline.

Mitigation measures:

The proposed pipeline must avoid all stone packed structures whether contemporary or as ruins situated within and around the residential settlements or located in a more rural setting.

There should be no impacts to the current initiation schools, which will have been destroyed by the time the pipeline is constructed. The seasons for the process should be noted during the construction process. The initiation schools occur during the winter season, June / July and the summer season November / December. Therefore, it is important to include the community members as part of the public participation process and keep open lines of communication between the developer, construction companies, environmental impact assessment practitioners to avoid any conflict that may arise due to the lack of inclusiveness and communication with the local communities within the immediate and adjacent villages.

6.2.2 SR1 Rising Main End (SR1RME)



Figure 7. View of the proposed pipeline SR1 Rising Main End (SR1RME).



Figure 8. View of the sites identified along the proposed pipeline SR1 Rising Main End (SR1RME).

Figure 7 shows the proposed SR1 Rising Main End (SR1RME) pipeline that runs south of Mpoki Village and south and west of Musong Village.

Figure 8 shows the sites identified along the proposed pipeline route. The proposed pipeline runs mostly through and along contemporary residential settlements and homesteads BLI_SR1RME_Set1 - BLI_SR1RME_Set4). These residential settlements include contemporary stone packed structures (kraals) and stone packed ruins. It is possible that graves may occur within and around the residential homesteads.

Mitigation measures:

The proposed pipeline must avoid all graves (formal and informal) and stone packed structures whether contemporary or as ruins situated within and around the residential homesteads.

6.2.3 SR1 Rising Main Mid (SR1M)



Figure 9. View of the proposed pipeline SR1 Rising Main Mid (SR1M).



Figure 10. View of the sites identified along the proposed pipeline SR1 Rising Main Mid (SR1M).

Figure 9 shows the proposed SR1 Rising Main Mid (SR1M) pipeline that runs through Tlankaneng Village.

Figure 10 shows the sites identified along the proposed pipeline route. The proposed pipeline runs mostly through and along contemporary residential settlements and homesteads (BLI_SR1M_Set1 - BLI_SR1M_Set3). These residential settlements include contemporary stone packed structures (kraals) and stone packed ruins. It is possible that graves may occur within and around the residential homesteads.

One (1) area containing stone packed ruins (BLI_SR1M_SP1) is located north of the proposed pipeline near the residential settlements (BLI_SR1M_Set2 and BLI_SR1M_Set3).

Two (2) cemetery areas (BLI_SR1M_G1 and BLI_SR1M_G2) occur along the proposed pipeline.

Mitigation measures:

The proposed pipeline must avoid all graves (formal and informal) and stone packed structures whether contemporary or as ruins situated within and around the residential homesteads.

6.2.4 SR1-CR1 Rising Mains from WTW Tie In, SR Rising Main from WTW, Abstraction Point 2 Gravity Main, and the WTW and Command Reservoir (C-B2)

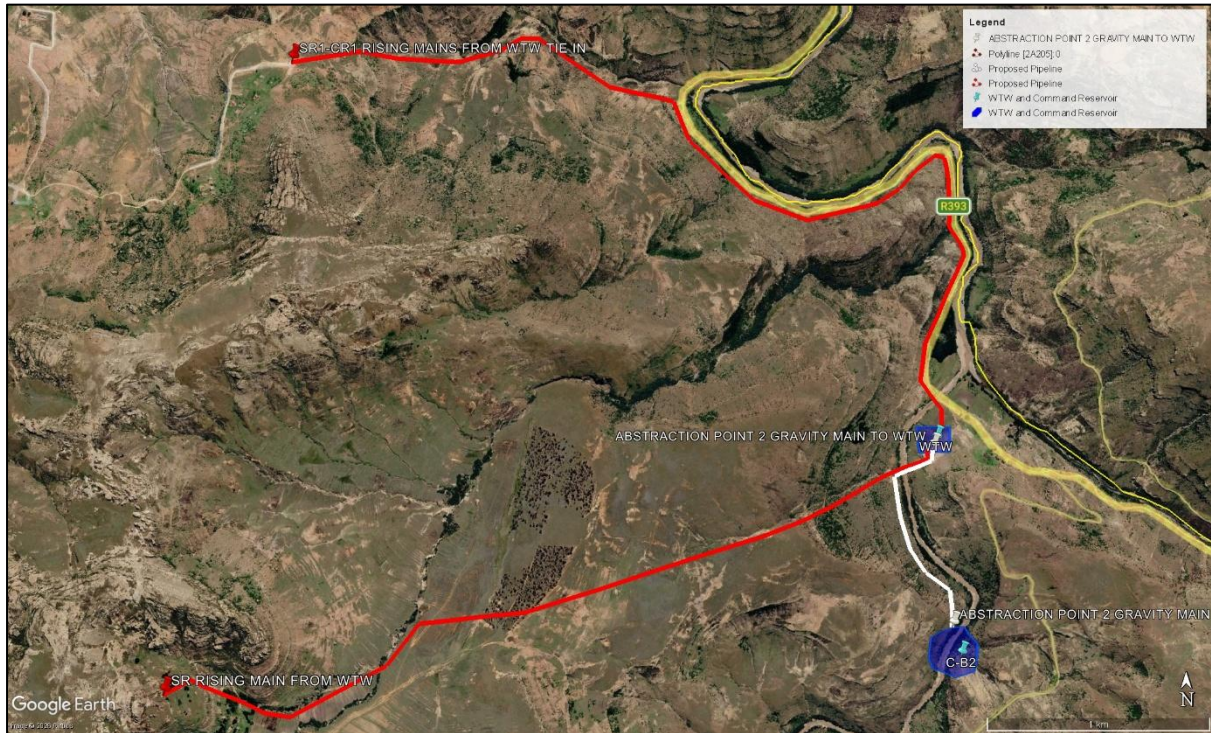


Figure 11. View of the proposed pipelines SR1-CR1 Rising Mains from WTW Tie In, SR Rising Main from WTW, Abstraction Point 2 Gravity Main, and the WTW and Command Reservoir (C-B2).

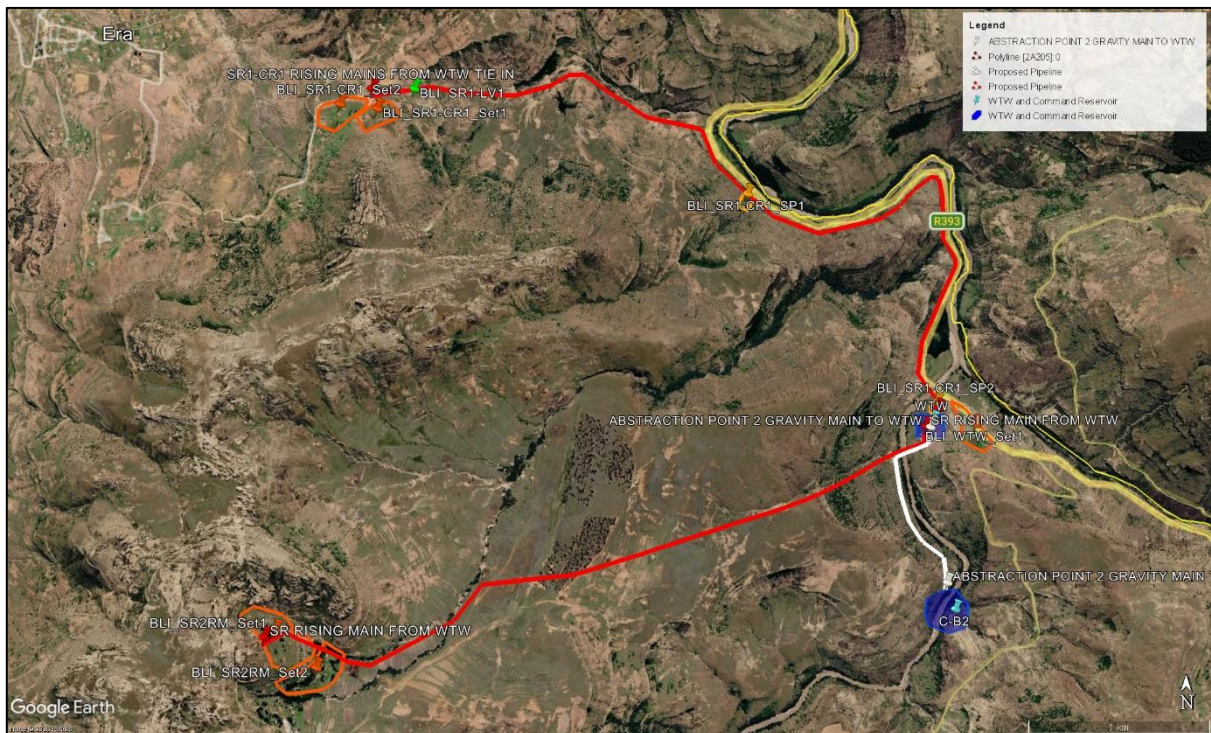


Figure 12. View of the sites identified along the proposed pipelines SR1-CR1 Rising Mains from WTW Tie In, SR Rising Main from WTW, Abstraction Point 2 Gravity Main, and the WTW and Command Reservoir (C-B2).

6.2.4.1 SR1-CR1 Rising Mains from WTW Tie In

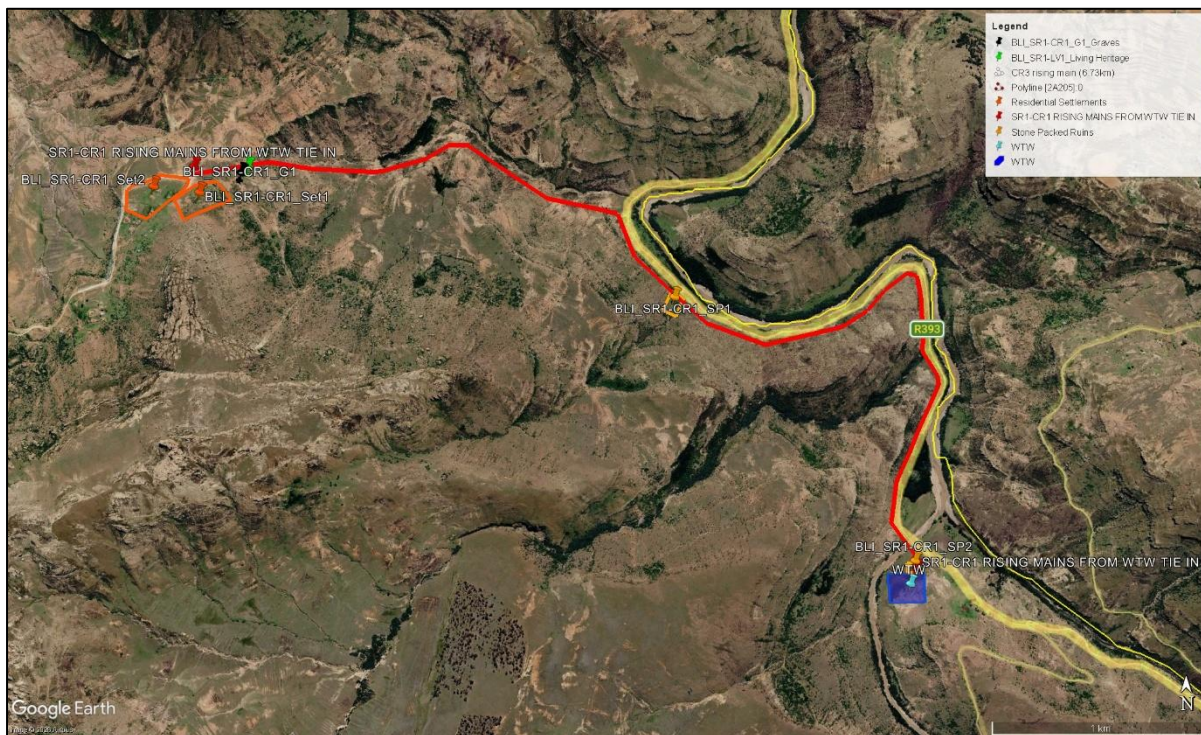


Figure 13. View of the sites identified along the proposed pipelines SR1-CR1 Rising Mains from WTW Tie In.

Figure 12 shows the location for the proposed SR1 Rising Main Mid (SR1M) pipeline.

Figure 13 shows the sites identified along the proposed pipeline route. The northern portion of the pipeline runs through mostly open veld. Residential homesteads occur on the eastern point of this section of the proposed pipeline. One (1) area containing built up stone packed graves belonging to the Fikizolo family (BLI_SR1-CR1_G1), was identified within this area. A stone packed cairn / isivivane (BLI_SR1-CR1_LV1) was also identified within the area. The graves and cairn are situated between 30 m and 80 m south of the proposed pipeline route; therefore, it is unlikely that they will be negatively impacted during the construction process.

Stone packed ruins (BLI_SR1-CR1_SP1) have been identified along the north-south portion of the proposed pipeline near to the R393 regional road. Stone packed ruins (BLI_SR1-CR1_SP2) have also been identified at the southern point of the proposed pipeline near the proposed Water Treatment Works (WTW).

Mitigation measures:

The proposed pipeline must avoid all graves (formal and informal) and stone packed structures whether contemporary or as ruins situated within and around the residential homesteads.

6.2.4.2 SR2 Rising Main from WTW



Figure 14. View of the sites identified along the proposed pipelines SR2 Rising Main from WTW.

Figure 12 shows the location for the proposed SR2 Rising Main from WTW pipeline.

Figure 14 shows the sites identified along the proposed pipeline route. Two (2) contemporary residential settlements (BLI_SR2RM_Set1 and BLI_SR2RM_Set2) occur at the eastern point of the proposed pipeline. The areas include both contemporary stone packed structures as well and stone packed ruins. Graves may also be associated with the residential settlements.

Mitigation measures:

The proposed pipeline must avoid all graves (formal and informal) and stone packed structures whether contemporary or as ruins situated within and around the residential homesteads.

6.2.4.3 Abstraction Point 2 Gravity Main, and the WTW and Command Reservoir (C-B2).

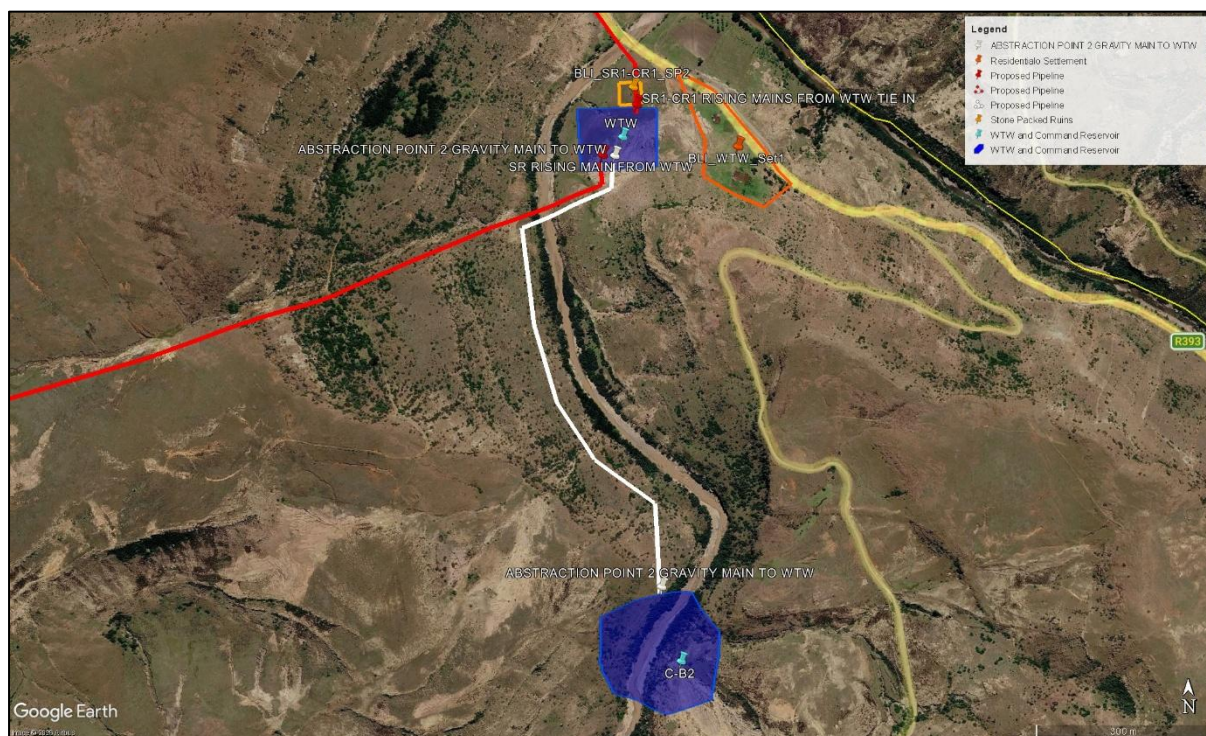


Figure 15. View of the sites identified along the proposed pipelines Abstraction Point 2 Gravity Main, and the WTW and Command Reservoir (C-B2).

Figure 12 shows the location for the proposed Abstraction Point 2 Gravity Main pipeline, and the Water Treatment Works (WTW) and Command Reservoir (C-B2).

Figure 14 shows the sites identified. One (1) contemporary residential settlement (BLI_WTW_Set1) is situated west of the WTW next to the R393. The area includes both contemporary stone packed structures as well and stone packed ruins. Graves may also be associated with the residential settlements.

Mitigation measures:

The proposed pipeline must avoid all graves (formal and informal) and stone packed structures whether contemporary or as ruins situated within and around the residential homesteads.

6.2.5 CR3 Gravity Main to R393, CR3 Rising Main, and Command Reservoir (CR 3).



Figure 16. View of the proposed pipelines CR3 Gravity Main to R393, CR3 Rising Main, and Command Reservoir (CR 3).

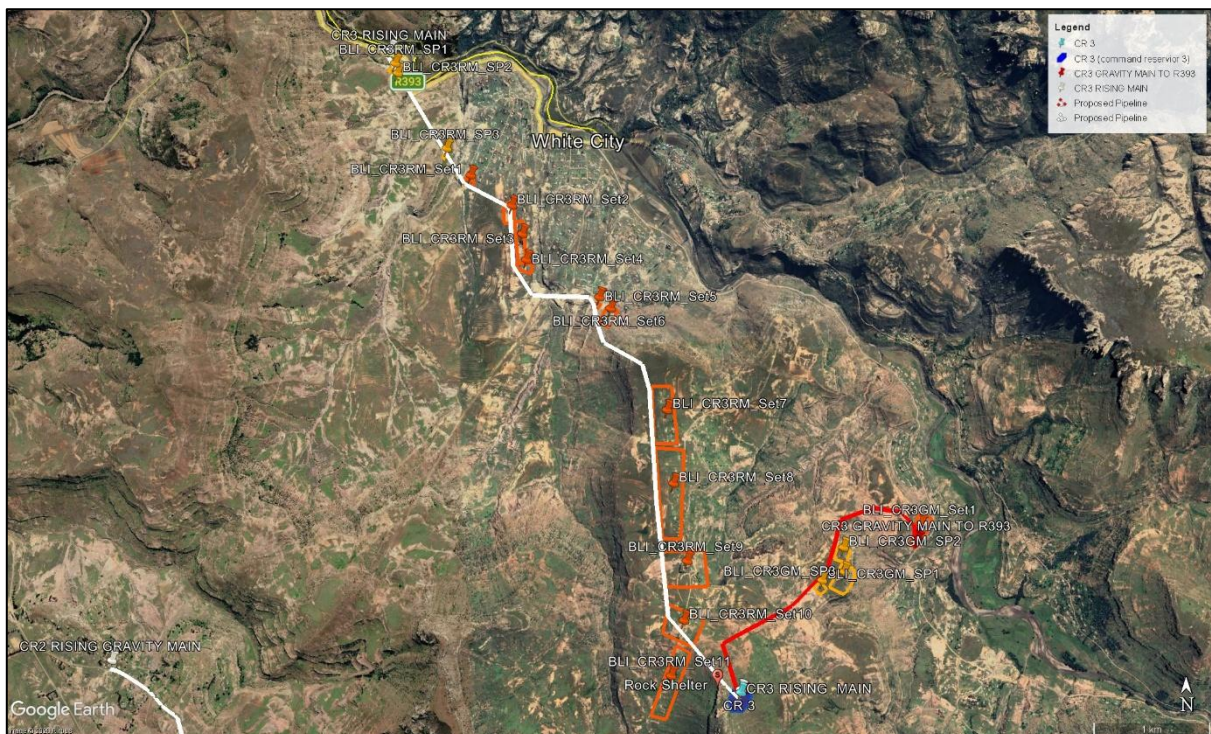


Figure 17. View of the sites identified along the proposed pipelines CR3 Gravity Main to R393, CR3 Rising Main, and Command Reservoir (CR 3).

Figure 16 shows the location for the proposed CR3 Gravity Main to R393, CR3 Rising Main pipelines, and the Command Reservoir (CR 3).

Figure 13 shows the sites identified along the proposed CR3 Gravity Main to R393, CR3 Rising Main pipelines, and the Command Reservoir (CR 3).

The CR3 Rising Main pipeline mostly runs along and through contemporary residential settlements and homesteads (BLI_CR3RM_Set1 - BLI_CR3RM_Set10). The residential settlements and homesteads include both contemporary stone packed structures as well and stone packed ruins. Graves may also be associated with the residential settlements.

Three (3) areas containing stone packed ruins were identified, two (2) (BLI_CR3RM_SP1 and BLI_CR3RM_SP2) near to the northern point of the proposed pipeline and one (1) (BLI_CR3RM_SP3) on the hilltop overlooking the village to south.

One (1) rock shelter was identified near the southern point of the proposed CR3 rising main pipeline and west of the area proposed for the Command Reservoir CR-3. The rock shelter has the potential to contain rock paintings, however, could not be investigated to confirm the presence of rock paintings.

The proposed CR3 Gravity Main to R393 pipeline runs mainly through open, however, one (1) contemporary residential settlement (BLI_CR3GM_Set1) occurs at the western point of the proposed pipeline. Four (4) areas containing stone packed ruins occur on the hilltop (BLI_CR3_SP1 - BLI_CR3_SP4). Site BLI_CR3_SP4 is situated east within the vicinity of the Command Reservoir CR-3.

Mitigation measures:

The proposed pipeline must avoid all graves (formal and informal) and stone packed structures whether contemporary or as ruins situated within and around the residential homesteads.

6.2.6 CR2 Rising Gravity Main and Command Reservoir (CR 2)



Figure 18. View of the proposed pipeline CR2 Rising Gravity Main and Command Reservoir (CR 2).

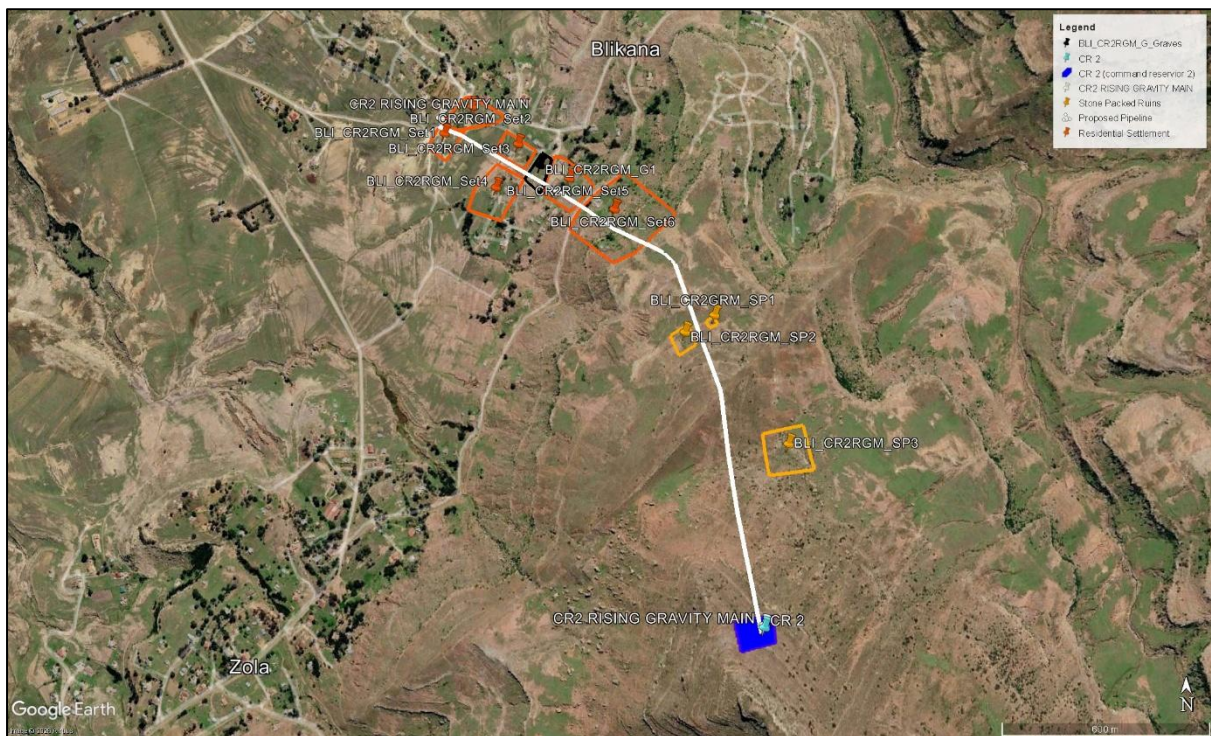


Figure 19. View of the sites identified along the proposed pipeline CR2 Rising Gravity Main and Command Reservoir (CR 2).

Figure 18 shows the location for the proposed pipeline CR2 Rising Gravity Main and the Command Reservoir (CR 2).

Figure 19 shows the sites identified. The proposed pipeline runs south of Blikana Village along and through contemporary residential settlements and homesteads. The contemporary residential settlements and homesteads (BLI_CR2RGM_Set1 - BLI_CR2RGM_Set6) occur mostly along the northern portion of the proposed pipeline at the base of the hill. The areas include both contemporary stone packed structures as well and stone packed ruins. Graves may also be associated with the residential settlements.

Three (3) areas containing stone packed ruins occur on the hilltop along the southern portion of the proposed pipeline, south of the residential settlements.

Mitigation measures:

The proposed pipeline must avoid all graves (formal and informal) and stone packed structures whether contemporary or as ruins situated within and around the residential homesteads.

6.2.7 Proposed Dams

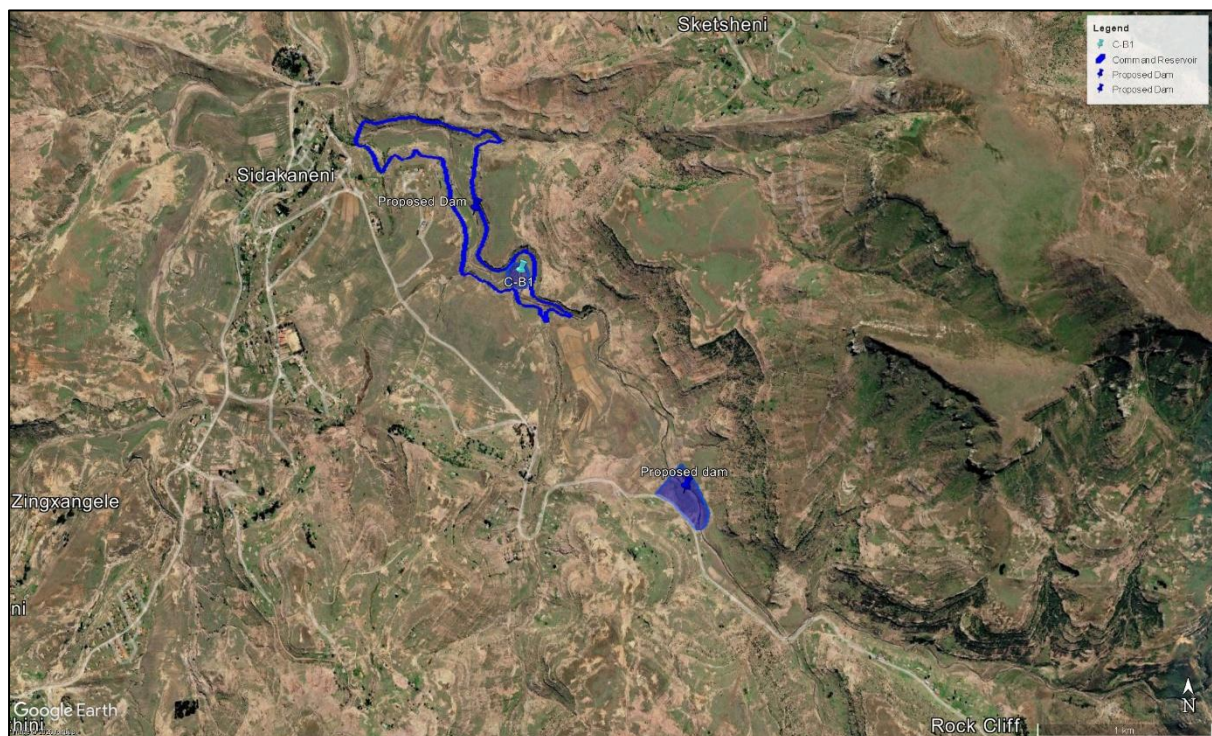


Figure 20. View of the proposed dams.



Figure 21. View sites identified within proposed dam in the south.

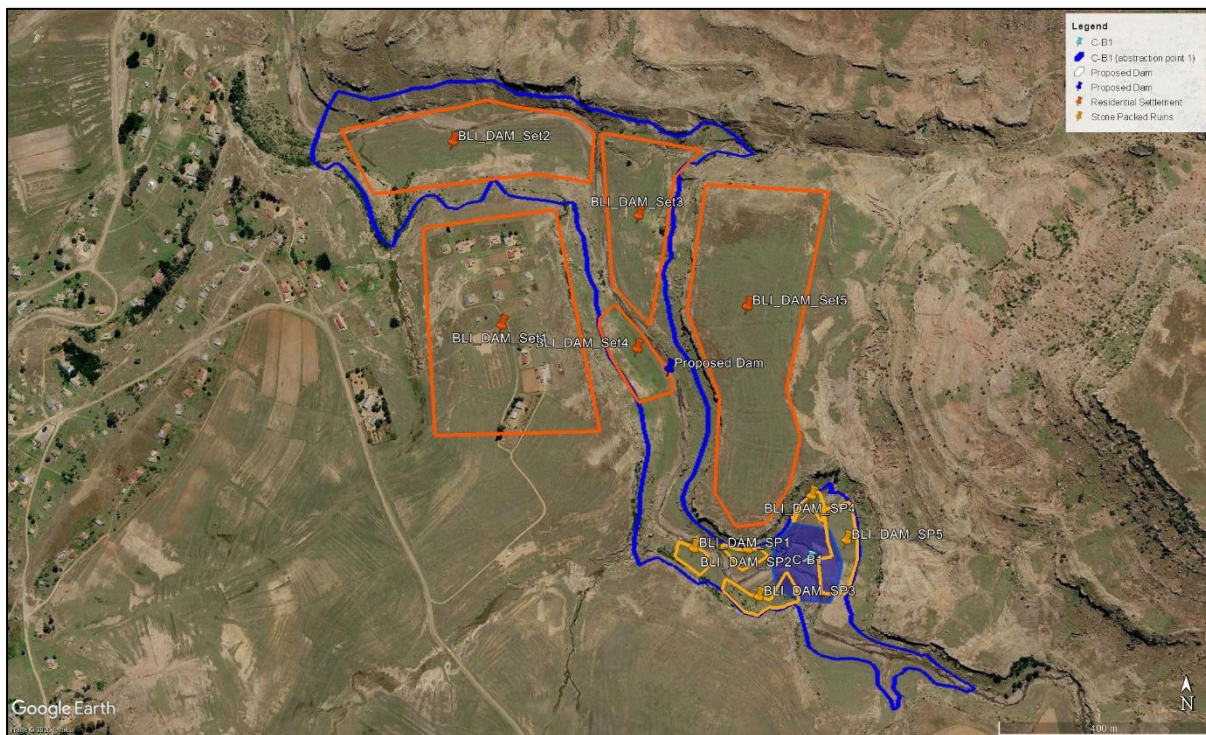


Figure 22. View of the proposed sites identified within the proposed dam.

Figure 20 shows the two (2) areas for the proposed dams. The proposed dams are located between several villages.

Figure 21 shows sites identified within the proposed dam in the south. Only one (1) area containing stone packed ruins (BLI_BD_SP1) is located on the southern edge of the proposed dam area. Residential settlements do occur around the proposed dam areas.

Figure 22 shows sites identified within the proposed dam in the north. Contemporary residential settlements and associated agricultural lands occur within and along the northern portion of the proposed dam (BLI_DAM_Set1 - BLI_DAM_Set5). Stone packed structures (BLI_DAM_SP1 - BLI_DAM_SP5) which may be contemporary or ruins occur within the southern portion of the proposed dam.

Mitigation measures:

The proposed pipeline must avoid all graves (formal and informal) and stone packed structures whether contemporary or as ruins situated within and around the residential homesteads.



Figure 23. View of the general landscape for Command Reservoir CR 1.



Figure 24. View of the general landscape for Command Reservoir CR 1.



Figure 25. View of the general landscape of the area for the proposed pipeline SR1-CR1 Rising Mains from WTW Tie In



Figure 26. View of the general landscape of the area for the proposed pipeline SR2 Rising Main from WTW.

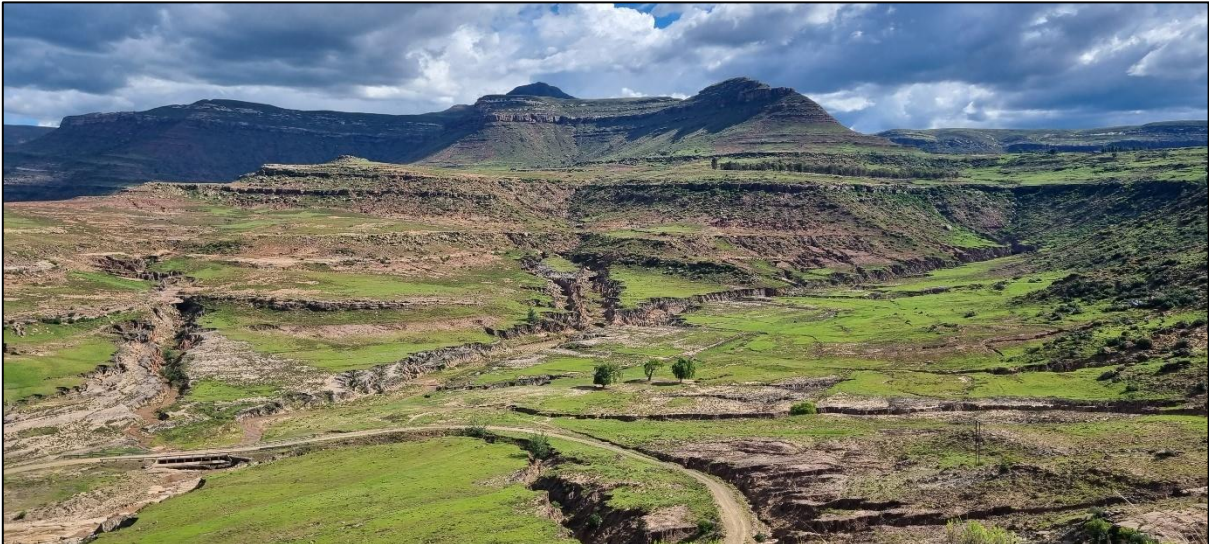


Figure 27. View of the general landscape of the area for the proposed pipeline SR2 Rising Main from WTW.



Figure 28. View of the general landscape of the area.



Figure 29. View of a residential settlement.



Figure 30. Examples of graves situated within residential settlements.



Figure 31. Examples of graves situated within residential settlements.



Figure 32. Examples of graves situated within residential settlements.

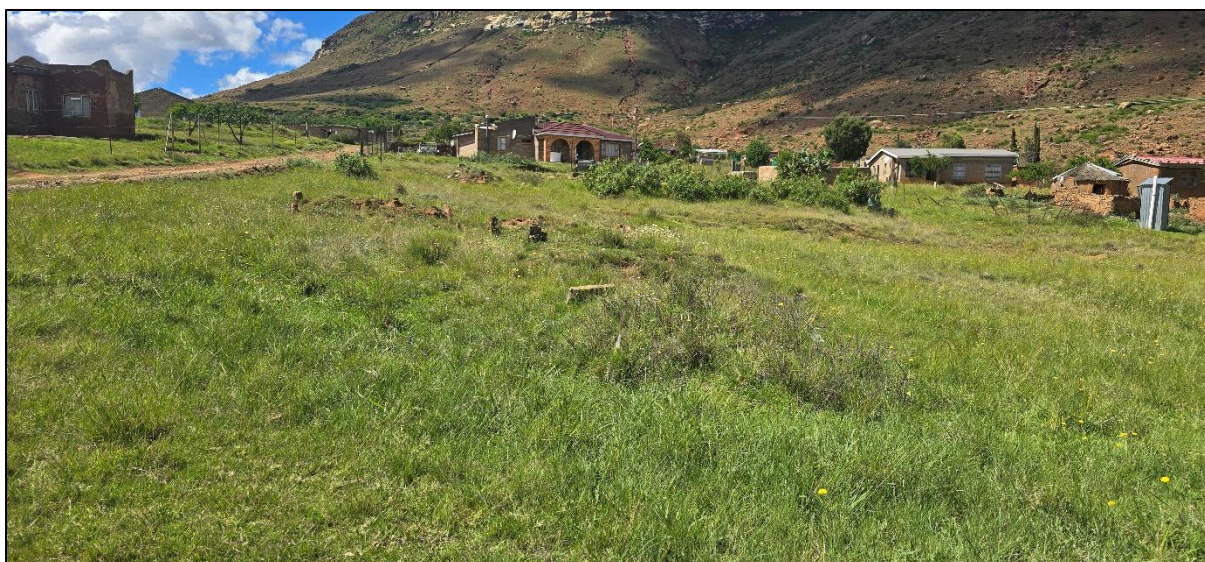


Figure 33. Examples of graves situated within residential settlements.



Figure 34. Examples of graves situated within residential settlements.



Figure 35. Examples of graves situated within residential settlements.



Figure 36. Examples of graves situated within residential settlements.



Figure 37. Examples of graves situated along roads.



Figure 38. View of the stone packed graves at Site BLI_SR1-CR1_G1 .



Figure 39. Examples of stone packed ruins situated within residential settlements.



Figure 40. Examples of stone packed ruins situated within residential settlements.



Figure 41. Examples of stone packed ruins situated within residential settlements.

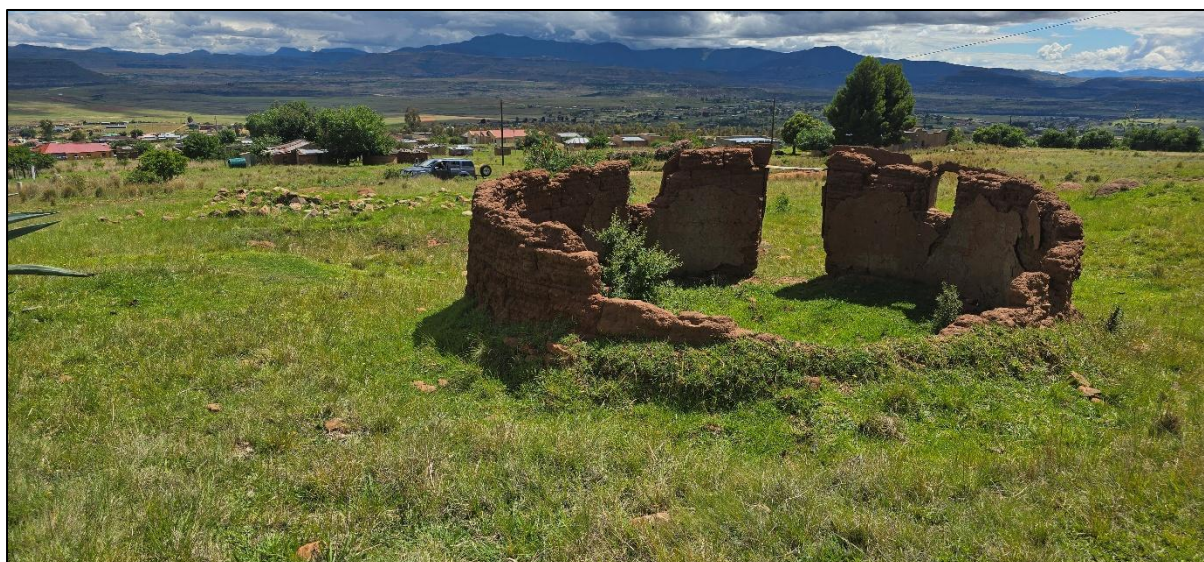


Figure 42. Examples of stone packed ruins situated within residential settlements.

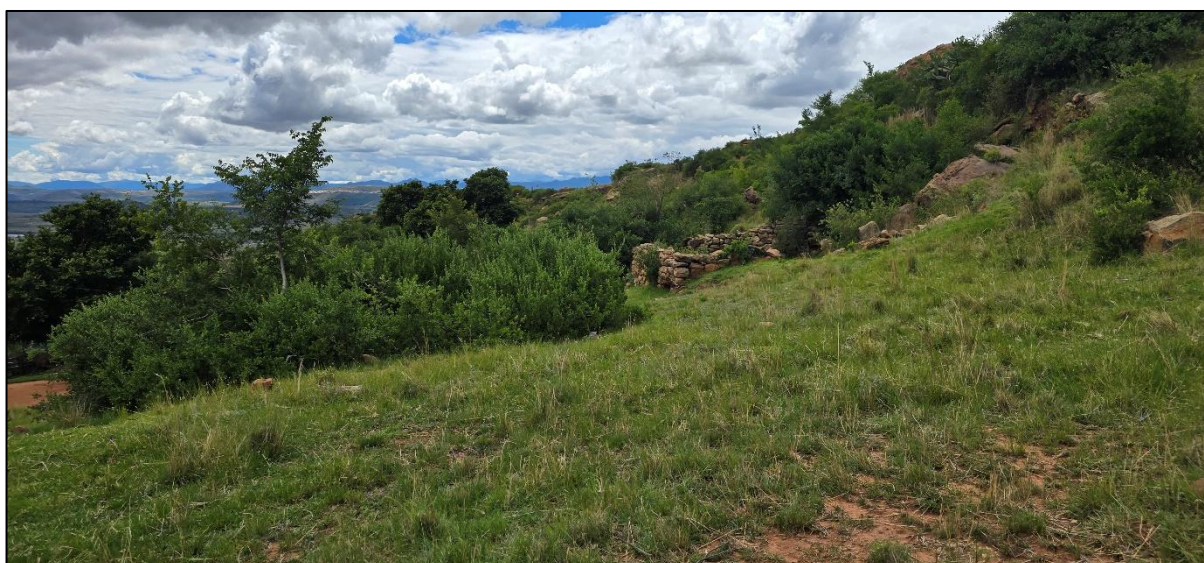


Figure 43. Examples of stone packed ruins situated within residential settlements.



Figure 44. View of stone packed ruins situated along the route for the proposed CR3 rising main pipeline.



Figure 45. View of the marker (idutywa) indicating the entrance to the boma area.



Figure 46. View of the rock shelter.



Figure 47. Close up view of the rock shelter.

7 CULTURAL LANDSCAPE

Cultural landscapes are a significant considering factor when conducting various archaeological and heritage impact assessments for proposed developments. The proposed Blikana Project, Joe Gqabi District Municipality, Eastern Cape Province, is considered as having a *high cultural heritage significance*.

This section gives a brief introduction to the concept of cultural landscape and its relation to various aspects of the dynamic interaction of humans as cultural agents and the landscape as a medium. A description of the interwoven relationships of humans with the landscape over time will be given including the archaeological, historical, and contemporary connections. Lastly, the living heritage makes up a small part of the study undertaken; its significance will be highlighted in relation to the communities who still identify with the area and retain a sense of identity to the landscape.

7.1 Concept of Cultural Landscape

Cultural landscapes can be interpreted as complex and rich extended historical records conceptualised as organisations of space, time, meaning, and communication moulded through cultural process. The connections between landscape and identity and, hence, memory is fundamental to the understanding of landscape and human sense of place. Cultural landscapes are the interface of culture and nature, tangible and intangible heritage, and biological and cultural diversity. They represent a closely woven net of relationships, the essence of culture and people's identity. They are symbol of the growing recognition of the fundamental links between local communities and their heritage, human kind, and its natural environment. In contemporary society, particular landscapes can be understood by taking into consideration the way in which they have been settled and modified including overall spatial organisation, settlement patterns, land uses, circulation networks, field layout, fencing, buildings, topography, vegetation, and structures. The

dynamics and complex nature of cultural landscapes can be regarded as text, written and read by individuals and groups for very different purposes and with very many interpretations. The messages embedded in the landscape can be read as signs about values, beliefs, and practices from various perspectives. Most cultural landscapes are living landscapes where changes over time result in a montage effect or series of layers, each layer able to tell the human story and relationships between people and the natural processes.

The impact of human action on the landscape occurs over time so that a cultural landscape is the result of a complex history and creates the significance of place in shaping historical identities by examining a community's presence or sense of place. The deeply social nature of relationships to place has always mediated people's understanding of their environment and their movements within it, and is a process which continues to inform the construction of people's social identity today. Social and spatial relationships are dialectically interactive and interdependent. Cultural landscape reflects social relations and institutions and they shape subsequent social relations.

Cultural landscapes tell the story of people, events, and places through time, offering a sense of continuity, a sense of the stream of time. Landscapes reflect human activity and are imbued with cultural values. They combine elements of space and time, and represent political as well as social and cultural constructs. Culture shapes the landscape through day-to-day routine and these practices become traditions incorporated with a collective memory the ultimate embodiments of memorial consciousness', examples such as monuments, annual events and archives. As they have evolved over time, and as human activity has changed, they have acquired many layers of meaning that can be analysed through archaeological, historical, geographical, and sociological study.

Indigenous people, European explorers, missionaries, pastoralists, international and domestic travellers all looked or look at similar landscapes and experience different versions of reality. Regardless of the power of different cultural groups, however, all groups create cultural landscape and interpret them from their own perspectives. This gives rise to tensions and contradictions between groups, invariably expressed in landscape forms as well.

Most cultural landscapes are living landscapes where changes over time result in a montage effect or series of layers, each layer able to tell the human story and relationships between people and the natural processes. A common theme underpinning the concept of ideology of landscape itself is the setting for everything we do is that of the landscape as a repository of intangible values and human meaning that nurture our very existence. Intangible elements are the foundation of the existence of cultural landscapes, and that are still occupied by contemporary communities, Landscape, culture and collective memory of a social group are intertwined and that this binds the individuals to their community. Culture shapes their everyday life, the values bind gradually, change slowly, and transfer from generation to generation – culture is a form of memory. We see

landscapes as a result of our shared system of beliefs and ideologies. In this way landscape is a cultural construct, a mirror of our memories and myths encoded with meanings which can be read and interpreted. Pivotal to the significance of cultural landscapes and the ideas of the ordinarily sacred is the realisation that it is the places, traditions, and activities of ordinary people that create a rich cultural tapestry of life, particularly through our recognition of the values people attach to their everyday places and concomitant sense of place and identity.

Living heritage means cultural expressions and practices that form a body of knowledge and provide for continuity, dynamism, and meaning of social life to generations of people as individuals, social groups, and communities. It also allows for identity and sense of belonging for people as well as an accumulation of intellectual capital current and future generation in the context of mutual respect for human, social and cultural rights.

Protection of these cultural landscapes involves some management issues such as successful conservation is based on the continuing vital link between people and their landscapes. This link can be disrupted or affected by for instance economic reasons. Other threats can also be attributed to urban expansion and development, tourism, war and looting and something beyond our human intervention: natural disasters and climate change. Cultural landscape management and conservation processes bring people together in caring for their collective identity and heritage, and provide a shared local vision within a global context. Local communities need, therefore, to be involved in every aspect of identification, planning and management of the areas as they are the most effective guardians of landscape heritage.

Most elements of living heritage are under threat of extinction due to neglect, modernisation, urbanisation, globalisation, and environmental degradation. Living heritage is at the centre of people's culture and identity, it is important to provide space for its continued existence. Living heritage must not be seen as merely safeguarding the past, but it must be seen as safeguarding the logic of continuity of what all communities or social groups regard as their valuable heritage, shared or exclusive.

In some instances, villages may capitalise on local landscape assets in order to promote tourism. Travel and tourism activities are built around the quest for experience, and the experience of place and landscape is a core element of that quest. It is a constant desire for new experiences that drives tourism, rather than a quest for authenticity. It is, therefore, important to engage actively with the tourism industry so that aspects of life and landscape important to cultural identity, including connection with place are maintained.

7.2 Archaeological Cultural Landscape

The archaeological landscape presents a challenge to interpretation as the landscape is wholly read by encountering pre-colonial artefacts on the landscape. As no pre-colonial archaeological heritage resources were encountered during the survey it is difficult to determine what exactly happened on the proposed development area, archaeologically. This however does not intend that no pre-colonial activity took place within the area. Owing to the interaction of later population with the landscape and the historical establishment of the area as conducive to farming activities, these disturbance in addition to climate change and natural weathering effects, changes to the organic layout once inhabited by the pre-colonial populations may have 'hidden' the material and organic material remains. Therefore, it is necessary to find and use the archaeological evidence available from the wider region to piece together and predict the possible movements and dynamics of the particular cultural landscape.

Pre-colonial human remains are mostly unmarked and invisible on the landscape, however, in some instances, they may be marked by organised piles of stones.

7.3 Contemporary Landscape

The contemporary cultural landscape is the product of millennia and centuries of human interaction, more so when the European Settlers entered the area. Remnants of these cultural interactions remain on the landscape, such as the built environment, features, artefacts, and marked and unmarked graves / burials with only oral histories and stories handed down from one generation to the next to remain in the collective memory of the community/ies living on the landscape.

It inevitable some landscapes will change and be completely transformed due to the needs of human society over time. The archaeological interpretation of the cultural landscape relies solely on the presence and surface visibility of artefacts left behind on the landscape by the populations who occupied and migrated through the area. A more comprehensive historical layer is able to be fitted onto the cultural landscape owing to the availability of written documents and the continuing existence of the traces left behind by European Settlers and the moulding of these traces used to shape the contemporary communities that occupies and regards itself attached to its present cultural landscape.

The contemporary cultural landscape is the product of millennia and centuries of human interaction, more so when the European Settlers entered the area. Remnants of these cultural interactions remain on the landscape, such as the built environment, features, artefacts, and marked and unmarked graves / burials with only oral histories and stories handed down from one generation to the next to remain in the collective memory of the community/ies living on the landscape.

However, the landscape remains rural with continuation of subsistence farming among the traditional settlements and villages.

The site assessment was conducted during the Initiation / Ulwaluko process. There will be no impacts to the current initiation schools, which will have been destroyed by the time the pipeline is constructed. The pipeline will not impact on future initiation sites along the river as it is below ground. However, the seasons for the process should be noted during the construction process. The initiation schools occur during the winter season, June / July and the summer season November / December. Therefore, it is important to include the community members as part of the public participation process and keep open lines of communication between the developer, construction companies, environmental impact assessment practitioners to avoid any conflict that may arise due to the lack of inclusiveness and communication with the local communities within the immediate and adjacent villages.

Cultural landscape management and conservation processes bring people together in caring for their collective identity and heritage and provide a shared local vision within a global context. Local communities need, therefore, to be involved in every aspect of identification, planning and management of the areas as they are the most effective guardians of landscape heritage.

Heritage management of the area must allow for the opportunity to build working relationships with the various stakeholders involved in management, development and heritage. These developments allow for heritage practitioners to access areas where significant recordings of archaeological and historical sites can be made, the recordings are of a greater significance when compared to the greater cultural landscape of the Blikana Project area.

8 COORDINATES AND SITES FOR THE PROPOSED BLIKANA PROJECT, JOE GQABI DISTRICT MUNICIPALITY, EASTERN CAPE PROVINCE

Table 1. Coordinates and sites for the proposed Blikana Project, Joe Gqabi District Municipality, Eastern Cape Province.

| REFERENCE | DESCRIPTION | CO-ORDINATE | HERITAGE GRADING |
|---|---|------------------------------|------------------|
| CR1GMC - CR 1 gravity main crossing to R393 (2 km) | | | |
| CR1 GRAVITY MAIN CROSSING TO R393 | CR 1 gravity main crossing to R393 (2 km) | 30°26'29.20"S; 27°32'1.46"E | N/A |
| CR1 GRAVITY MAIN CROSSING TO R393 | CR 1 gravity main crossing to R393 (2 km) | 30°26'19.37"S; 27°30'48.87"E | N/A |
| BLI_CR1GMC_Set1 | Contemporary Residential Settlement / Homestead | 30°26'18.13"S; 27°30'49.67"E | Not Graded |

| | | | |
|--|---|------------------------------|---------------------------|
| BLI_CR1GMC_Set2 | Contemporary Residential Settlement / Homestead | 30°26'21.71"S; 27°30'50.53"E | Not Graded |
| BLI_CR1GMC_SP1 | Stone packed ruins | 30°26'16.17"S; 27°31'3.78"E | Low – Medium Significance |
| BLI_CR1GMC_SP2 | Stone packed ruins | 30°26'20.58"S; 27°30'57.79"E | Low – Medium Significance |
| BLI_CR1GMC_SP3 | Stone packed ruins | 30°26'24.87"S; 27°31'29.97"E | Low – Medium Significance |
| BLI_CR1GMC_LV1 | Place of Initiation / Ulwaluko process | 30°26'19.80"S; 27°31'6.72"E | High Significance |
| SR1RME - SR 1 rising main end (2.1km) | | | |
| SR1 RISING MAIN END | SR 1 rising main end (2.1km) | 30°29'38.59"S; 27°32'5.82"E | N/A |
| SR1 RISING MAIN END | SR 1 rising main end (2.1km) | 30°29'59.18"S; 27°31'10.60"E | N/A |
| BLI_SR1RME_Set1 | Contemporary Residential Settlement / Homestead | 30°29'58.78"S; 27°31'18.49"E | Not Graded |
| BLI_SR1RME_Set2 | Contemporary Residential Settlement / Homestead | 30°29'54.29"S; 27°31'34.28"E | Not Graded |
| BLI_SR1RME_Set3 | Contemporary Residential Settlement / Homestead | 30°29'55.71"S; 27°31'51.34"E | Not Graded |
| BLI_SR1RME_Set4 | Contemporary Residential Settlement / Homestead | 30°29'38.77"S; 27°32'2.65"E | Not Graded |
| SR1M - SR 1 rising main mid (2 km) | | | |
| SR1 RISING MAIN MID | SR 1 rising main mid (2 km) | 30°29'26.89"S; 27°33'18.76"E | N/A |
| SR1 RISING MAIN MID | SR 1 rising main mid (2 km) | 30°29'27.86"S; 27°34'22.25"E | N/A |
| BLI_SR1M_Set1 | Contemporary Residential Settlement / Homestead | 30°29'34.14"S; 27°33'30.88"E | Not Graded |
| BLI_SR1M_Set2 | Contemporary Residential Settlement / Homestead | 30°29'32.57"S; 27°34'2.97"E | Not Graded |
| BLI_SR1M_Set3 | Contemporary Residential Settlement / Homestead | 30°29'27.95"S; 27°34'8.36"E | Not Graded |
| BLI_SR1M_SP1 | Stone packed ruins | 30°29'26.74"S; 27°33'58.99"E | Low – Medium Significance |
| BLI_SR1M_G1 | Graves / Cemeteries | 30°29'38.73"S; 27°33'50.32"E | High Significance |
| BLI_SR1M_G2 | Graves / Cemeteries | 30°29'28.91"S; 27°34'24.17"E | High Significance |
| SR1-CR1 - SR 1 - CR 1 rising mains from WTW tie-in (5.17km) | | | |
| SR1-CR1 RISING MAINS FROM WTW TIE IN | SR 1 - CR 1 rising mains from WTW tie-in (5.17km) | 30°30'25.66"S; 27°37'11.61"E | N/A |
| SR1-CR1 RISING MAINS FROM WTW TIE IN | SR 1 - CR 1 rising mains from WTW tie-in (5.17km) | 30°29'27.93"S; 27°35'10.94"E | N/A |
| BLI_SR1-CR1_Set1 | Contemporary Residential Settlement / Homestead | 30°29'31.63"S; 27°35'12.15"E | Not Graded |
| BLI_SR1-CR1_Set2 | Contemporary Residential Settlement / Homestead | 30°29'30.60"S; 27°35'4.16"E | Not Graded |

| | | | |
|---|--|------------------------------|---------------------------|
| BLI_SR1-CR1_SP1 | Stone packed ruins | 30°29'45.74"S; 27°36'30.35"E | Low – Medium Significance |
| BLI_SR1-CR1_SP2 | Stone packed ruins | 30°30'24.49"S; 27°37'11.33"E | Low – Medium Significance |
| BLI_SR1-CR1_G1 | Graves / Cemeteries | 30°29'28.67"S; 27°35'18.63"E | High Significance |
| BLI_SR1-LV1 | Cairn / Isisivane | 30°29'27.80"S; 27°35'19.64"E | High Significance |
| SR2RM - SR 2 rising main from WTW (inaccessible no access road) 4.1 km | | | |
| SR RISING MAIN FROM WTW | SR 2 rising main from WTW (inaccessible no access road) 4.1 km | 30°30'29.07"S; 27°37'8.93"E | N/A |
| SR RISING MAIN FROM WTW | SR 2 rising main from WTW (inaccessible no access road) 4.1 km | 30°31'4.85"S; 27°34'51.14"E | N/A |
| BLI_SR2RM_Set1 | Contemporary Residential Settlement / Homestead | 30°31'3.62"S; 27°34'53.27"E | Not Graded |
| BLI_SR2RM_Set2 | Contemporary Residential Settlement / Homestead | 30°31'10.75"S; 27°35'0.84"E | Not Graded |
| CR3R - CR3 rising main (6.73km) | | | |
| CR3 RISING MAIN | CR3 rising main (6.73km) | 30°33'57.53"S; 27°40'26.59"E | N/A |
| CR3 RISING MAIN | CR3 rising main (6.73km) | 30°31'4.14"S; 27°38'35.81"E | N/A |
| BLI_CR3RM_Set1 | Contemporary Residential Settlement / Homestead | 30°31'39.30"S; 27°39'1.78"E | Not Graded |
| BLI_CR3RM_Set2 | Contemporary Residential Settlement / Homestead | 30°31'47.73"S; 27°39'14.98"E | Not Graded |
| BLI_CR3RM_Set3 | Contemporary Residential Settlement / Homestead | 30°31'55.56"S; 27°39'18.32"E | Not Graded |
| BLI_CR3RM_Set4 | Contemporary Residential Settlement / Homestead | 30°32'2.65"S; 27°39'19.61"E | Not Graded |
| BLI_CR3RM_Set5 | Contemporary Residential Settlement / Homestead | 30°32'13.03"S; 27°39'43.00"E | Not Graded |
| BLI_CR3RM_Set6 | Contemporary Residential Settlement / Homestead | 30°32'16.22"S; 27°39'46.55"E | Not Graded |
| BLI_CR3RM_Set7 | Contemporary Residential Settlement / Homestead | 30°32'43.80"S; 27°40'4.22"E | Not Graded |
| BLI_CR3RM_Set8 | Contemporary Residential Settlement / Homestead | 30°33'3.52"S; 27°40'6.19"E | Not Graded |
| BLI_CR3RM_Set9 | Contemporary Residential Settlement / Homestead | 30°33'24.38"S; 27°40'10.47"E | Not Graded |
| BLI_CR3RM_Set10 | Contemporary Residential Settlement / Homestead | 30°33'40.20"S; 27°40'9.42"E | Not Graded |
| BLI_CR3RM_Set11 | Contemporary Residential Settlement / Homestead | 30°33'55.06"S; 27°40'5.45"E | Not Graded |
| BLI_CR3RM_SP1 | Stone packed ruins | 30°31'8.42"S; 27°38'37.57"E | Low – Medium Significance |
| BLI_CR3RM_SP2 | Stone packed ruins | 30°31'11.10"S; 27°38'38.30"E | Low – Medium Significance |
| BLI_CR3RM_SP3 | Stone packed ruins | 30°31'31.83"S; 27°38'54.02"E | Low – Medium Significance |

| | | | |
|---|--|------------------------------|---------------------------|
| Rock Shelter | Rock shelter that may have rock art paintings | 30°33'54.45"S; 27°40'19.89"E | High Significance |
| CR3GM - CR 3 gravity main to R393 (inaccessible no access road) 2.85km | | | |
| CR3 GRAVITY MAIN TO R393 | CR 3 gravity main to R393 (inaccessible no access road) 2.85km | 30°33'19.82"S; 27°41'24.63"E | N/A |
| CR3 GRAVITY MAIN TO R393 | CR 3 gravity main to R393 (inaccessible no access road) 2.85km | 30°33'57.78"S; 27°40'26.92"E | N/A |
| BLI_CR3GM_Set1 | Contemporary Residential Settlement / Homestead | 30°33'15.28"S; 27°41'25.54"E | Not Graded |
| BLI_CR3GM_SP1 | Stone packed ruins | 30°33'29.91"S; 27°40'53.08"E | Low - Medium Significance |
| BLI_CR3GM_SP2 | Stone packed ruins | 30°33'21.08"S; 27°40'59.83"E | Low - Medium Significance |
| BLI_CR3GM_SP3 | Stone packed ruins | 30°33'27.63"S; 27°40'59.93"E | Low - Medium Significance |
| CR2RGM - CR 2 rising gravity main (1.67 km) | | | |
| CR2 RISING GRAVITY MAIN | CR 2 rising gravity main (1.67 km) | 30°34'34.45"S; 27°37'38.87"E | N/A |
| CR2 RISING GRAVITY MAIN | CR 2 rising gravity main (1.67 km) | 30°33'52.62"S; 27°37'7.76"E | N/A |
| BLI_CR2RGM_Set1 | Contemporary Residential Settlement / Homestead | 30°33'53.94"S; 27°37'8.12"E | Not Graded |
| BLI_CR2RGM_Set2 | Contemporary Residential Settlement / Homestead | 30°33'51.56"S; 27°37'10.93"E | Not Graded |
| BLI_CR2RGM_Set3 | Contemporary Residential Settlement / Homestead | 30°33'54.82"S; 27°37'15.58"E | Not Graded |
| BLI_CR2RGM_Set4 | Contemporary Residential Settlement / Homestead | 30°33'58.60"S; 27°37'13.34"E | Not Graded |
| BLI_CR2RGM_Set5 | Contemporary Residential Settlement / Homestead | 30°33'57.96"S; 27°37'20.83"E | Not Graded |
| BLI_CR2RGM_Set6 | Contemporary Residential Settlement / Homestead | 30°34'0.90"S; 27°37'25.38"E | Not Graded |
| BLI_CR2GRM_SP1 | Stone packed ruins | 30°34'10.07"S; 27°37'35.02"E | Low - Medium Significance |
| BLI_CR2RGM_SP2 | Stone packed ruins | 30°34'11.50"S; 27°37'32.16"E | Low - Medium Significance |
| BLI_CR2RGM_SP3 | Stone packed ruins | 30°34'20.79"S; 27°37'42.27"E | Low - Medium Significance |
| BLI_CR2RGM_G1 | Graves / Cemeteries | 30°33'56.72"S; 27°37'17.85"E | High Significance |
| WTW | | | |
| WTW | Waste Water Works | 30°30'27.87"S; 27°37'10.49"E | N/A |
| BLI_WTW_Set1 | Contemporary Residential Settlement / Homestead | 30°30'28.62"S; 27°37'19.43"E | Not Graded |

| | | | |
|--|---|------------------------------|---------------------------|
| C-B2 (abstraction point 2/pick-up weir) | | | |
| C-B2 | abstraction point 2/pick-up weir | 30°31'2.88"S; 27°37'15.01"E | N/A |
| CR 2 (command reservoir 2) | | | |
| CR 2 | command reservoir 2 | 30°34'34.60"S; 27°37'38.85"E | N/A |
| CR 3 (command reservoir 3) | | | |
| CR 3 | command reservoir 3 | 30°33'58.32"S; 27°40'26.54"E | N/A |
| Proposed Blikana Dam | | | |
| Proposed dam | Proposed dam in the south | 30°36'50.45"S; 27°37'13.46"E | N/A |
| BLI_BD_SP1 | Stone packed ruins | 30°36'55.73"S; 27°37'15.26"E | Low - Medium Significance |
| C-B1 (abstraction point 1) and Proposed Dam 2 | | | |
| C-B1 | abstraction point 1 | 30°36'8.18"S; 27°36'35.79"E | N/A |
| Proposed dam 2 | Proposed dam in the north | 30°35'55.94"S; 27°36'25.44"E | N/A |
| BLI_DAM_Set1 | Contemporary Residential Settlement / Homestead | 30°35'53.27"S; 27°36'13.06"E | Not Graded |
| BLI_DAM_Set2 | Contemporary Residential Settlement / Homestead | 30°35'41.13"S; 27°36'9.11"E | Not Graded |
| BLI_DAM_Set3 | Contemporary Residential Settlement / Homestead | 30°35'46.01"S; 27°36'23.17"E | Not Graded |
| BLI_DAM_Set4 | Contemporary Residential Settlement / Homestead | 30°35'54.66"S; 27°36'23.03"E | Not Graded |
| BLI_DAM_Set5 | Contemporary Residential Settlement / Homestead | 30°35'52.04"S; 27°36'31.12"E | Not Graded |
| BLI_DAM_SP1 | Stone packed ruins | 30°36'7.44"S; 27°36'27.23"E | Low - Medium Significance |
| BLI_DAM_SP2 | Stone packed ruins | 30°36'7.49"S; 27°36'31.22"E | Low - Medium Significance |
| BLI_DAM_SP3 | Stone packed ruins | 30°36'10.45"S; 27°36'31.97"E | Low - Medium Significance |
| BLI_DAM_SP4 | Stone packed ruins | 30°36'4.07"S; 27°36'35.97"E | Low - Medium Significance |
| BLI_DAM_SP5 | Stone packed ruins | 30°36'6.89"S; 27°36'38.53"E | Low - Medium Significance |
| CR 1 (command reservoir 1) | | | |
| CR 1 | command reservoir 1 | 30°28'3.53"S; 27°30'54.50"E | N/A |

9 DESCRIPTION AND GRADING OF SITES

9.1 Stone Packed Structures / Ruins

Contemporary stone packed kraals and residential units as well as stone packed ruins can be found within the residential homesteads and outside of demarcated residential homesteads.

The stone packed structures / ruins are considered as having a *low - medium heritage significance*.

9.2. Graves and Cemeteries

Contemporary and historical formal and informal graves can be found within the residential homesteads and outside of demarcated residential homesteads. The formal graves include graves that have been built up and include headstones, some of these graves are fenced, especially those outside of demarcated residential homesteads. The informal graves include graves which are stone packed, some containing headstones with the name of the family painted or written on, whereas others comprise only an upright rock, some with the name of the family painted or written on.

9.3 Cultural Landscape and Living Heritage

There should be no impacts to the current initiation schools, which will have been destroyed by the time the pipeline is constructed. The seasons for the process should be noted during the construction process. The initiation schools occur during the winter season, June / July and the summer season November / December. Therefore, it is important to include the community members as part of the public participation process and keep open lines of communication between the developer, construction companies, environmental impact assessment practitioners to avoid any conflict that may arise due to the lack of inclusiveness and communication with the local communities within the immediate and adjacent villages.

A cairn / isivivane was noted to occur within the proposed Blikana project area.

The cultural landscape and living heritage are considered as having a *high heritage significance*.

9.4 Rock Shelters

The mountainous regions of this area from Lundean's / Lundin's Nek to Lady Grey, as well as across the Lesotho border are known to be rich in Bushman rock art paintings. One (1) rock shelter was identified along the proposed CR3 rising main pipeline route west of the area proposed for the Command Reservoir CR-3. The rock shelter has the potential to

contain rock paintings, however, could not be investigated to confirm the presence of rock paintings.

The rock shelter is considered as having a *high heritage significance*.

10 ASSESSMENTS OF IMPACTS ON THE ARCHAEOLOGICAL AND CULTURAL HERITAGE RESOURCES

10.1 Stone Packed Structures / Ruins

Negative impact on the stone packed ruins can be avoided by implementing the appropriate mitigation measures for the protection of the heritage resource. The proposed pipeline must avoid all stone packed structures whether contemporary or as ruins situated within and around the residential settlements or located in a more rural setting.

10.2. Graves and Cemeteries

Negative impact on the graves and cemeteries can be avoided by implementing the appropriate mitigation measures for the protection of the heritage resource. The proposed pipeline must avoid all graves and cemeteries situated within and around the residential settlements or located in a more rural setting.

10.3 Cultural Landscape and Living Heritage

There should be no impacts to the current initiation schools, which will have been destroyed by the time the pipeline is constructed. The seasons for the process should be noted during the construction process. The initiation schools occur during the winter season, June / July and the summer season November / December. Therefore, it is important to include the community members as part of the public participation process and keep open lines of communication between the developer, construction companies, environmental impact assessment practitioners to avoid any conflict that may arise due to the lack of inclusiveness and communication with the local communities within the immediate and adjacent villages.

10.4 Rock Shelters

The rock shelter has the potential to contain rock paintings, however, and should be investigated to confirm the presence of rock paintings. It is unlikely that the proposed pipeline and command reservoir would have negative impact on the rock shelter.

11 LIMITATIONS AND GAPS IN KNOWLEDGE

11.1 Literature Review

The gathering of information, consultation and research is limited to archaeological heritage data that is known and has been recorded over time. Little systematic archaeological research has been conducted within the immediate area of the proposed development.

However, several relevant archaeological and heritage impact assessments have been conducted within the region. These impact assessments have identified several Early, Middle, and Later Stone Age artefact scatters and sites, coastal archaeological sites, historical artefacts and built environment structures, as well as evidence of Iron Age agropastoralist occupation and/or interaction by the presence of broken earthenware pot sherds and associated material culture and settlement patterns.

11.2 Fieldwork

It is ideal for the entire area to be surveyed on foot, especially areas that have not been researched extensively or at all. The identification of archaeological / historical heritage sites is limited to the surface and in areas where archaeological visibility may be hindered by dense vegetation cover, limited to the investigation of disturbed surface areas. The state of archaeological remains can only be determined by surface observation which in itself is limited and does not expose the true state of archaeological evidence. However, a physical survey observation is able to assess the environment where a desktop assessment cannot do justice in determining the significance of the archaeological sensitivity of the proposed development area.

Most importantly, archaeological and heritage resources are a non-renewable resource that cannot be replaced once lost or destroyed, therefore, every effort should be taken to preserve or conserve the most significant of heritage resources. Mitigation measures have been recommended by the author and should be respected and implemented prior to the commencement of the proposed development.

12 RECOMMENDATIONS AND MITIGATION

No archaeological heritage resources were identified during the survey, therefore, considered as having a *low archaeological heritage significance*, by surface observation. This does not confirm that archaeological do not occur along the route of the pipeline, only that none were observed on the surface. It is always possible that stone artefacts, historical artefacts, and unmarked human burials that occur between the surface and up to 1.5 m below ground may be exposed during the bush clearing and excavation phases of the construction phases. The stone packed structures resembling historical kraals are considered as having a *low - medium heritage significance* and should not be negatively

impacted during the course of the construction activities. The built environment structures are not considered of heritage significance, but it is unlikely that these structures will be impacted during the construction. The graves and cemeteries are considered of *high heritage significance*. The cultural landscape is considered as being of a *high heritage significance* considering the impacts the contemporary communities and the continuation of cultural and ritual practices within the area.

Development may proceed as planned however the following recommendations must be implemented prior to and during the course of the construction activities. Additional comments, recommendations and mitigation may be commented upon and requested from the Eastern Cape Provincial Heritage Resources Authority (ECPHRA).

The following recommendation must be implemented prior to the commencement of development:

1. Due to the extent of the of the area and difficulty in access to various areas not all areas could be physically surveyed. An archaeological heritage walkthrough must be conducted for the final layout of the project. The final layout of the project must include and inform on the laydown areas, constructions site areas, as well as the roads that would be required to access the currently inaccessible areas. The cultural heritage sites and the rock shelter that could hold potential rock art paintings can be appropriately identified and demarcated during this walk-through.

In addition, the following recommendations and mitigation measures must be considered and implemented prior to the commencement of development:

1. The stone packed structures / ruins are considered as having a *low - medium heritage significance* and should not be negatively impacted during the course of the construction activities.
2. All graves and cemeteries are considered as having a *high cultural heritage significance*. All graves must not be negatively impacted during the construction of the proposed pipeline and associated infrastructure (dams, WTW, and command reservoirs).
3. If it is necessary for graves to be relocated the corrects procedures must be followed. The costs and process would be on the onus of the developer. The proper procedures and a rigorous public participation process would have to be followed before the graves may be exhumed, relocated and reburied.
4. The cultural landscape is considered as being of a *high heritage significance* considering vast number of graves and cemeteries within the area as well as living heritage areas such places where the initiation / Ulwaluko process occurs and structures such as cairns.

Local Tribal authorities and associated members, members of the community who will be directly affected by the construction of the pipeline, and well as members of the community who will not be directly affected, who reside in the villages surrounding the project area, must be consulted and included as part of the public participation process. Residents who do not reside within the project area may still have a spiritual connection to the project area.

5. If concentrations of pre-colonial archaeological and/or historical heritage material (such as below surface dense artefacts accumulations and associated material) and/or human remains (including graves and burials) are uncovered during construction, all work must cease immediately and be reported to the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) (043 745 0888) and/or the author the report, so that systematic and professional investigation/excavation can be undertaken. Phase 2 mitigation in the form of test-pitting/sampling or systematic excavations and collections of the archaeological / heritage site may then be conducted to establish the contextual status of the sites and possibly remove the archaeological deposit before development activities continue.
6. A person or persons must be trained as a site monitor/s to report any archaeological sites found during the development. Construction managers/foremen and/or the Environmental Control Officer (ECO) should be informed before construction starts on the possible types of heritage sites and cultural material they may encounter and the procedures to follow when they find sites.
7. A Chance Finds Protocol must be compiled and made readily available for all staff working during the construction phase of the project.

13 CONCLUSION

The purpose of the study was to conduct a phase 1 archaeological and cultural heritage assessment for the proposed Blikana Project, Joe Gqabi District Municipality, Eastern Cape Province. The survey was conducted to establish the range and importance of the exposed and *in situ* archaeological heritage material remains, sites and features; to establish the potential impact of the development; and to make recommendations to minimize possible damage to the archaeological heritage.

No archaeological heritage resources were identified during the survey, therefore, considered as having a *low archaeological heritage significance*, by surface observation. This does not confirm that archaeological do not occur along the route of the pipeline, only that none were observed on the surface. It is always possible that stone artefacts, historical artefacts, and unmarked human burials that occur between the surface and up to 1.5 m below ground may be exposed during the bush clearing and excavation phases of the construction phases. The stone packed structures resembling historical kraals are

considered as having a *low - medium heritage significance* and should not be negatively impacted during the course of the construction activities. The built environment structures are not considered of heritage significance, but it is unlikely that these structures will be impacted during the construction. The graves and cemeteries are considered of *high heritage significance*. The cultural landscape is considered as being of a *high heritage significance* considering the impacts the contemporary communities and the continuation of cultural and ritual practices within the area.

Due to the extent of the of the area and difficulty in access to various areas not all areas could be physically surveyed. An archaeological heritage walkthrough must be conducted for the final layout of the project. The final layout of the project must include and inform on the laydown areas, constructions site areas, as well as the roads that would be required to access the currently inaccessible areas. The cultural heritage sites and the rock shelter that could hold potential rock art paintings can be appropriately identified and demarcated during this walk-through.

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15 RELEVANT ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENTS

Very little systematic archaeological research has been conducted within the immediate and surrounding areas for the proposed project, therefore, Cultural Resource Management (CRM) Reports, such as archaeological and heritage impact assessments, assist in attempting to predict the archaeological and heritage resources that may be found within the proposed development areas. The following reports are considered relevant to the current project:

- Dreyer, C. 2008. First Phase 1 Archaeological and Cultural Heritage Investigation of the Proposed New Solid Waste Landfill Site at Sterkspruit, Eastern Cape.
- Paleo Field Services. ND. Phase 1 Heritage Impact Assessment of the Proposed New Construction of a New Waste Water Treatment Works (WWTW) and Associated Pipe Line Infrastructure in the Town of Sterkspruit, Eastern Cape Province.
- Mngomezulu. M. 2014. Application for Exemption on the Construction of Further Education Training (FET) Colleges in Sterkspruit, Eastern Cape Province.

16 GENERAL REMARKS AND CONDITIONS

NOTE: This report is a phase 1 archaeological and cultural heritage impact assessment only and does not include or exempt other required specialist assessments as part of the heritage impact assessments (HIAs).

The National Heritage Resources Act (Act No. 25 of 1999, Section 35 [Brief Legislative Requirements]) requires a full Heritage Impact Assessment (HIA) in order that all heritage resources including all places or objects of aesthetics, architectural, historic, scientific, social, spiritual, linguistic, or technological value or significance are protected. Thus, any assessment should make provision for the protection of all these heritage components including archaeology, shipwrecks, battlefields, graves, and structures older than 60 years, living heritage, historical settlements, landscapes, geological sites, palaeontological sites and objects.

It must be emphasized that the conclusions and recommendations expressed in this phase 1 archaeological impact assessment (AIA) are based on the visibility of archaeological remains, features and sites and may not reflect the true state of affairs. Many archaeological remains, features and sites may be covered by soil and vegetation and will only be located once this has been removed. In the event of such archaeological heritage being uncovered (such as during any phase of construction activities), archaeologists or the relevant heritage authority must be informed immediately so that they can investigate the importance of the sites and excavate or collect material before it is destroyed. The onus is on the developer to ensure that this agreement is honoured in accordance with the National Heritage Resources Act No. 25 of 1999 (NHRA 25 of 1999).

Archaeological Specialist Reports (desktops and AIA's) will be assessed by the relevant heritage resources authority. The final comment/decision rests with the heritage resources authority that may confirm the recommendations in the archaeological specialist report and grant a permit or a formal letter of permission for the destruction of any cultural sites.

APPENDIX A: HERITAGE LEGISLATIVE REQUIREMENTS

Sections 3, 34, 35, 36, 38, 48, 49 and 51 of the National Heritage Resources Act 25 of 1999 apply:

S3. National estate

(1) For the purposes of this Act, those heritage resources of South Africa which are of cultural significance or other special value for the present community and for future generations must be considered part of the national estate and fall within the sphere of operations of heritage resources authorities.

(2) Without limiting the generality of subsection (1), the national estate may include –

- (a) places, buildings, structures and equipment of cultural significance;
- (b) places to which oral traditions are attached or which are associated with living heritage;
- (c) historical settlements and townscapes;
- (d) landscapes and natural features of cultural significance;
- (e) geological sites of scientific or cultural importance;
- (f) archaeological and palaeontological sites;
- (g) graves and burial grounds, including –
 - (i) ancestral graves;
 - (ii) royal graves and graves of traditional leaders;
 - (iii) graves and victims of conflict;
 - (iv) graves of individuals designated by the Minister by notice in the Gazette;
 - (v) historical graves and cemeteries; and
 - (vi) other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);
- (h) sites of significance relating to the history of slavery in South Africa;
- (i) movable objects, including –
 - (i) objects recovered from the soil or waters of South Africa, including archaeological and palaeontological specimens;
 - (ii) objects to which oral traditions are attached or which are associated with living heritage;
 - (iii) ethnographic art and objects;
 - (iv) military objects;
 - (v) objects of decorative or fine art;
 - (vi) objects of scientific or technological interest; and
 - (vii) books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act (Act No. 43 of 1996).

(3) Without limiting the generality of subsections (1) and (2), a place or object is to be considered part of national estate if it has cultural significance or other special value because of –

- (a) its importance in the community, or pattern of South Africa's history;
- (b) its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- (c) its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
- (d) its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
- (e) its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- (f) its importance in demonstrating a high degree of creative or technical achievement at a particular period;
- (g) its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and
- (i) sites of significance relating to the history of slavery in South Africa.

S34. Structures

- (1) No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.
- (2) Within three months of the refusal of the provincial heritage resources authority to issue a permit, consideration must be given to the protection of the place concerned in terms of one of the formal designations provided for in Part 1 of this Chapter.
- (3) The provincial heritage resources authority may at its discretion, by notice in the Provincial Gazette, make an exemption from the requirements of subsection (1) within a defined geographical area, provided that it is satisfied that heritage resources falling into the defined area or category have been identified and adequately provided for in terms of the provisions of Part 1 of this Chapter.
- (4) Should the provincial heritage resources authority believe it to be necessary if by, following a three-month notice period published in the Provincial Gazette, withdraw or amend a notice under subsection (3).

S35. Archaeology, palaeontology and meteorites

- (1) Subject to the provisions of section 8, the protection of archaeological and palaeontological sites and material and meteorites is the responsibility of a provincial heritage resources authority: Provided that the protection of any wreck in the territorial waters and maritime cultural zone shall be the responsibility of SAHRA.
- (2) Subject to the provisions of subsection (8)(a), all archaeological objects, palaeontological material and meteorites are the property of the State. The responsible heritage authority must, on behalf of the State, at its discretion ensure that such objects are lodged with a museum or other public institution that has a collation policy acceptable to the heritage resources authority and may in doing so establish such terms and conditions as it sees fit for the conservation of such objects.
- (3) Any person who discovers archaeological or palaeontological objects or material or a meteorite in the course of development or agricultural activity must immediately report the find to the responsible heritage resources authority, or to the nearest local authority or museum, which must immediately notify such heritage resources authority.
- (4) No person may, without a permit issued by the responsible heritage resources authority—
 - (a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;
 - (b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;
 - (c) trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or
 - (d) bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.
- (5) When the responsible heritage resources authority has reasonable cause to believe that any activity or development which will destroy, damage or alter any archaeological or palaeontological site is under way, and where no application for a permit has been submitted and not heritage resources management procedure in terms of section 38 has been followed, it may –
 - (a) Serve on the owner or occupier of the site or on the person undertaking such development an order for the development to cease immediately for such period as is specified in the order;
 - (b) Carry out an investigation for the purpose of obtaining information on whether or not an archaeological or palaeontological site exists and whether mitigation is necessary;
 - (c) If mitigation is deemed by the heritage resources authority to be necessary, assist the person on whom the order has been served under paragraph (a) to apply for a permit as required in subsection (4); and
 - (d) Recover the costs of such investigation from the owner or occupier of the land on which it is believed an archaeological or palaeontological site is located or from the person proposing to undertake the development if no application for a permit is received within two weeks of the order being served.

- (5) The responsible heritage resources authority may, after consultation with the owner of the land on which archaeological or palaeontological site or a meteorite is situated, serve a notice on the owner or any other controlling authority, to prevent activities within a specified distance from such site or meteorite.
- (6)(a) Within a period of two years from the commencement of this Act, any person in possession of any archaeological or palaeontological material or object or any meteorite which was acquired other than in terms of a permit issued in terms of this Act, equivalent provincial legislation or the National Monuments Act, 1969 (Act No. 28 of 1969), must lodge with the responsible heritage resources authority lists of such objects and other information prescribed period shall be deemed to have been recovered after the date on which this Act came into effect.
 - (b) Paragraph (a) does not apply to any public museum or university.
 - (c) The responsible authority may at its discretion, by notice in the Gazette or the Provincial Gazette, as the case may be, exempt any institution from the requirements of paragraph (a) subject to such conditions as may be specified in the notice, and may by similar notice withdraw or amend such exemption.
- (8) and object or collection listed under subsection (7) –
 - (a) remains in the ownership of the possessor for the duration of his or her lifetime, and SAHRA must be notified who the successor is; and
- (9) must be regularly monitored in accordance with regulations by the responsible heritage authority.

S36. Burial grounds and graves

- (1) Where it is not the responsibility of any other authority, SAHRA must conserve and generally care for burial grounds and graves protected in terms of this section, and it may make such arrangements for their conservation as it sees fit.
- (2) SAHRA must identify and record the graves of victims of conflict and any other graves which it deems to be of cultural significance and may erect memorials associated with the grave referred to in subsection (1), and must maintain such memorials.
- (3)(a) No person may, without a permit issued by SAHRA or a provincial heritage resources authority—
 - (a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
 - (b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
 - (c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment which assists in the detection or recovery of metals.
- (3) SAHRA or provincial heritage resources authority may not issue a permit for the destruction or damage of any burial ground or grave referred to in subsection (3)(a) unless it is satisfied that the applicant has made satisfactory arrangements for the exhumation and re-interment of the contents of such graves, at the cost of the applicant and in accordance with any regulations made by the responsible heritage resources authority.
- (4) SAHRA or a provincial heritage resources authority may not issue a permit for any activity under subsection (3)(b) unless it is satisfied that the applicant has, in accordance with regulations made by the responsible heritage resources authority -
 - (a) Made a concerted effort to contact and consult communities and individuals who by tradition have an interest in such grave or burial ground; and
 - (b) Reached agreements with such communities and individuals regarding the future of such grave or burial ground.
- (5) Subject to the provision of any other law, any person who in the course of development or any other activity discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the responsible heritage resources authority which must, in co-operation with the South African Police Service and in accordance with regulations of the responsible heritage resources authority –
 - (a) Carry out an investigation for the purpose of obtaining information on whether or not such grave is protected in terms of this Act or is of significance to any community; and
 - (b) If such grave is protected or is of significance, assist any person who or community which is the direct descendant to make arrangements for the exhumation and re-interment of the contents of such grave or, in the absence of such person or community, make any such arrangements as it deems fit.

(6)(a) SAHRA must, over a period of five years from the commencement of this Act, submit to Minister for his or her approval lists of graves and burial grounds of persons connected with the liberation struggle and who died in exile or as a result of the action of State security forces or agent's provocateur and which, after a process of public consultation, it believes should be included among those protected under this section.

(c) The Minister must publish such lists as he or she approved in the Gazette.

(6) Subject to section 56(2), SAHRA has the power, with respect to the graves of victims of conflict outside the Republic, to perform any function of a provincial heritage resources authority in terms of this section.

(7) SAHRA must assist other State Departments in identifying graves in a foreign country of victims of conflict connected with the liberation struggle and, following negotiations with the next of kin, or relevant authorities, it may reinter the remains of that person in a prominent place in the capital of the Republic.

S.37 Public monuments and memorials

Public monuments and memorials must, without the need to publish a notice to this effect, be protected in the same manner as places which are entered in a heritage register referred to in section 30.

S38. Heritage resources management

(1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorized as –

(a) the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;

(b) the construction of a bridge or similar structure exceeding 50 m in length;

(c) any development or other activity which will change the character of the site –

(i) exceeding 5 000 m² in extent, or

(ii) involving three or more erven or subdivisions thereof; or

(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or

(iv) the costs of which will exceed a sum set in terms of regulations by SAHRA, or a provincial resources authority;

(d) the re-zoning of a site exceeding 10 000 m² in extent; or

(e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must as the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

(2) The responsible heritage resources authority must, within 14 days of receipt of a notification in terms of subsection (1) –

(a) if there is a reason to believe that heritage resources will be affected by such development, notify the person who intends to undertake the development to submit an impact assessment report. Such report must be compiled at the cost of the person proposing the development, by a person or persons approved by the responsible heritage resources authority with relevant qualifications and experience and professional standing in heritage resources management; or

(b) notify the person concerned that this section does not apply.

(3) The responsible heritage resources authority must specify the information to be provided in a report required in terms of subsection (2)(a): Provided that the following must be included:

(a) The identification and mapping of all heritage resources in the area affected;

(b) An assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6(2) or prescribed under section 7;

(c) An assessment of the impact of development on such heritage resources;

(d) An evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;

(e) The results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;

- (f) If heritage resources will be adversely affected by the proposed development, the consideration of alternative; and
 - (g) Plans for mitigation of any adverse effects during and after the completion of the proposed development.
- (4) The report must be considered timeously by the responsible heritage resources authority which must, after consultation with the person proposing the development, decide –
- (a) whether or not the development may proceed;
 - (b) any limitations or conditions to be applied to the development;
 - (c) what the general protections in terms of this Act apply, and what formal protections may be applied, to such heritage resources;
 - (d) whether compensatory action is required in respect of any heritage resources damaged or destroyed as a result of development; and
 - (e) whether the appointment of specialists is required as a condition of approval of the proposal.
- (5) A provincial heritage resources authority may not make any decision under subsection (4) with respect to any development with impacts on a heritage resource protected at national level unless it has consulted SAHRA.
- (6) The applicant may appeal against the decision of the provincial heritage resources authority to the MEC, who –
- (a) must consider the views of both parties; and
 - (b) may at his or her discretion –
 - (i) appoint a committee to undertake an independent review of the impact assessment report and the decision of the responsible heritage resources authority;
 - And
 - (ii) consult SAHRA; and
 - (c) must uphold, amend or overturn such decision.
- (7) The provisions of this section do not apply to a development described in subsection (1) affecting any heritage resource formally protected by SAHRA unless the authority concerned decides otherwise.
- (8) The provisions of this section do not apply to a development as described in subsection (1) if an evaluation of the impact of such development on heritage resources is required in terms of the impact of such development of heritage resources is required in terms of the Environment Conservation Act, 1989 (Act No. 73 of 1989), or the integrated environmental management guidelines issued by the Department of Environmental Affairs and Tourism, or the Mineral Act, 1991 (Act No. 50 of 1991), or any other legislation: Provided that the consenting authority must ensure that the evaluation fulfils the requirements of the relevant heritage resources authority in terms of subsection (3), and any comments and recommendations of the relevant heritage resources authority with regards to such development have been taken into account prior to the granting of the consent.
- (9) The provincial heritage resources authority, with the approval of the MEC, may, by the notice in the Provincial Gazette, exempt from the requirements of this section any place specified in the notice.
- (10) Any person who has complied with the decision of a provincial heritage resources authority in subsection (4) or of the MEC in terms of subsection (6) or other requirements referred to in subsection (8), must be exempted from compliance with all other protections in terms of this part, but any existing heritage agreements made in terms of section 42 continue to apply.

S48. Permits

- (1) A heritage resources authority may prescribe the manner in which an application is made to it for any permit in terms of this Act and other requirements for permit applications, including –
- (a) any particulars or information to be furnished in the application and any documents, drawings, plans, photographs and fees which should accompany the application;
 - (b) minimum qualifications and standards of practice required of persons making application for a permit to perform specified actions in relation to particular categories of protected heritage resources;
 - (c) standards and conditions for the excavation and curation of archaeological and palaeontological objects and material and meteorites recovered by authority of a permit;

- (d) the conditions under which, bore a permit is issued, a financial deposit must be lodged and held in trust for the duration of the permit or such period as the heritage resources authority may specify, and conditions of forfeiture of such deposit;
 - (e) conditions for the temporary export and return of objects under section 32 or section 35;
 - (f) the submission of reports on work done under authority of a permit; and
 - (g) the responsibilities of the heritage resources authority regarding monitoring of work done under authority of a permit.
- (2) On application by any person in the manner prescribed under subsection (1), a heritage resources authority may in its discretion issue to such person a permit to perform such actions at such time and subject to such terms, conditions and restrictions or directions as may be specified in the permit, including a condition –
- (a) that the applicant give security in such form and such amount determined by the heritage resources authority concerned, having regard to the nature and extent of the work referred to in the permit, to ensure the satisfactory completion of such work or the curation of objects and material recovered during the course of the work; or
 - (b) providing for the recycling or deposit in a materials bank of historical building materials; or
 - (c) stipulating that design proposals be revised; or
 - (d) regarding the qualifications and expertise required to perform those actions for which the permit is issued.
- (3) A heritage resources authority may at its discretion, in respect of any heritage resource protected by it in terms of the provisions of Chapter II, by notice in the Gazette or the Provincial Gazette, as the case may be, grant an exemption from the requirement to obtain a permit from it for such activities or class of activities by such persons or class of persons in such circumstances as are specified in the notice.

S49. Appeals

- (1) Regulations by the Minister and the MEC must provide for a system of appeal to the SAHRA Council for a provincial heritage resources council against a decision of a committee or other delegated representative of SAHRA or a provincial heritage resources body authority.
- (2) Anybody wishing to appeal against a decision of the SAHRA Council or the council of a provincial heritage resources authority must notify the Minister or MEC in writing within 30 days. The Minister or MEC, must have due regards to –
- (a) the cultural significance of the heritage resources in question;
 - (b) heritage conservation principles; and
 - (c) any other relevant factor which is brought to its attention by the appellant or the heritage resources authority.

S51. Offences and penalties

- (1) Notwithstanding the provisions of any other law, any person who contravenes –
- (a) sections 27(18), 29(10), 32(13) OR 32(19) is guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 1 of the Schedule;
 - (b) sections 33(2), 35(4) is guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 2 of the Schedule;
 - (c) sections 28(3) or 34(1) are guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 3 of the Schedule;
 - (d) sections 27(22), 32(15), 35(6), or 44(3) is guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 4 of the Schedule;
 - (e) sections 27(23)(b), 32(17), 35(3) or 51(8) is guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 5 of the Schedule;
 - (f) sections 32(13), 32(16), 32(20), 35(7)(a), 44(2), 50(5) or 50(12) is guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 6 of the Schedule.
- (2) The Minister, with the concurrence of the relevant MEC, may prescribe a penalty of a fine or of imprisonment for a period not exceeding six months for any contravention or failure to comply with regulations by heritage resources authorities or by-laws by local authorities.
- (3) The Minister or the MEC, as the case may be, may make regulations in terms of which the magistrate of the district concerned may –

- (a) levy admission of guild fines up to a maximum amount of R10 000 for infringement of the terms of this Act for which such heritage resources authority is responsible; and
 - (b) serve a notice upon a person who is contravening a specified provision of this Act or has not complied with the terms of a permit issued by such authority, imposing a daily fine of R50 for the duration of the contravention, subject to a maximum period of 365 days.
- (4) The Minister may from time to time by regulation adjust the amounts referred to in subsection (3) in order to account for the effect of inflation.
- (5) Any person who-
- (a) fails to provide any information that is required to be given, whether or not on the request of a heritage resources authority, in terms of this Act;
 - (b) for the purpose of obtaining, whether for himself or herself or for any other person, any permit, consent or authority in terms of this Act, makes any statement or representation knowing it to be false or not knowing or believing it to be true;
 - (c) fails to comply with or perform any act contrary to the terms, conditions, restrictions or directions subject to which any permit, consent or authority has been issued to him or her in terms of this Act;
 - (d) obstructs the holder of a permit in terms of this Act in exercising a right granted to him or her by means of such a permit;
 - (e) damages, takes, or removes, or causes to be damaged, taken or removed from a place protected in terms of this Act any badge or sign erected by a heritage authority or a local authority under section 25(2)(j) or section 27(17), any interpretive display or any other property or thing.
 - (f) receives any badge, emblem or any other property or thing unlawfully taken or removed from a place protected in terms of this Act; and
 - (g) within the terms of this Act, commits or attempts to commit any other unlawful act, violates any prohibition or fails to perform any obligation imposed upon him or by its terms, or who counsels, procures, solicits or employs any other person to do so.
- shall be guilty of an offence and upon conviction shall be liable to such maximum penalties, in the form of a fine or imprisonment or both such fine and such imprisonment, as shall be specified in the regulations under subsection (3).
- (6) Any person who believes that there has been an infringement of any provision of this Act, may lay a charge with the South African Police Service or notify a heritage resources authority.
- (7) A magistrate's court shall, notwithstanding the provisions of any other law, be competent to impose any penalty under this Act.
- (8) When any person has been convicted of any contravention of this Act which has resulted in damage or to alteration of a protected heritage resource the court may -
- (a) order such person to put right the result of the act of which he or she was guilty, in the manner so specified and within such period as may be so specified, and upon failure of such person to comply with the terms of such order, order such person to pay to the heritage resources authority responsible for the protection of such resource a sum equivalent to the cost of making good; or
 - (b) when it is of the opinion that such a person is not in a position to make good damage done to a heritage resources by virtue of the offender not being the owner or occupier of a heritage resources or for any other reason, or when it is advised by the heritage resources authority responsible for the protection of such resource that it is unrealistic or undesirable to require that the results of the act be made good, order such person to pay the heritage resources authority a sum equivalent to the cost of making good.
- (9) In addition to other penalties, if the owner of a place has been convicted of an offence in terms of this Act involving the destruction of, or damage to, the place, the Minister on the advice of SAHRA or the MEC on the advice of a provincial heritage resources authority, may serve on the owner an order that no development of such place may be undertaken, except when making good the damage and maintaining the cultural value of the place, or for a period not exceeding 10 years specified in the order.
- (10) Before making the order, the local authority and any person with a registered interest in the land must be given a reasonable period to make submissions on whether the order should be made and for how long.
- (11) An order of no development under subsection (9) attaches to the land and is binding not only on the owner as at the date of the order, but also on any person who becomes an owner of the place while the order remains in force.
- (12) The Minister on the advice of SAHRA, may reconsider an order of no development and may in writing amend or repeal such order.

(13) In any case involving vandalism, and whenever else a court deems it appropriate, community service involving conservation of heritage resources may be substituted for, or instituted in addition to, a fine or imprisonment.

(14) Where a court convicts a person of an offence in terms of this Act, it may order for forfeiture to SAHRA or the provincial heritage resources authority concerned, as the case may be, of a vehicle, craft, equipment or any other thing used or otherwise involved in the committing of the offence.

(15) A vehicle, craft, equipment or other thing forfeited under subsection (14) may be sold or otherwise disposed of as the heritage resources authority concerned deems fit.

APPENDIX B: GRADING SYSTEM

The National Heritage Resources Act 25 of 1999 stipulates the assessment criteria and grading of archaeological sites. The following categories are distinguished in Section 7 of the Act and the South African Heritage Resources Agency:

- National: This site is suggested to be considered of Grade 1 significance and should be nominated as such. Heritage resources with qualities so exceptional that they are of special national significance.
- Provincial: This site is suggested to be considered of Grade II significance and should be nominated as such. Heritage resources which, although forming part of the national estate, can be considered to have special qualities which make them significant within the context of a province or a region
- Local: This site is suggested to be Grade IIIA significance. This site should be retained as a heritage register site (High significance) and so mitigation as part of the development process is not advised.
- Local: This site is suggested to be Grade IIIB significance. It could be mitigated and (part) retained as a heritage register site (High significance).
- 'General' Protection A (Field Rating IV A): This site should be mitigated before destruction (usually High/Medium significance).
- 'General' Protection B (Field Rating IV B): This site should be recorded before destruction (usually medium significance).
- 'General' Protection C (Field Rating IV C): This site has been sufficiently recorded (in the Phase 1). It requires no further recording before destruction (usually Low significance).

APPENDIX C: IDENTIFICATION OF ARCHAEOLOGICAL FEATURES AND MATERIAL FROM COASTAL AND INLAND AREAS: guidelines and procedures for developers

1. Stone artefacts

Stone artefacts are the most common and identifiable precolonial artefacts occurring on the South Africa landscape. Early Stone Age, Middle Stone Age and Later Stone Age stone artefacts occur in various concentrations on the South Africa landscape. Stone artefacts are very commonly found occurring on flat floodplains in a mostly secondary or disturbed context. However, stone artefacts can be also be found in an *in situ* or undisturbed context in areas where little human or animal impact happens such as open sites mostly near rocky outcrops, amongst boulders and caves.

These may be difficult for the layman to identify. However, large accumulations of flaked stones which do not appear to have been distributed naturally should be reported. If the stone tools are associated with bone remains, development should be halted immediately and archaeologists notified.



Early Stone Age (ESA) stone artefact
(1.5 million years ago – 250 000 years ago)



Middle Stone Age stone artefacts
(250 000 – 30 000 years ago)



Later Stone Age stone artefacts
(30 000 years ago – historical times)

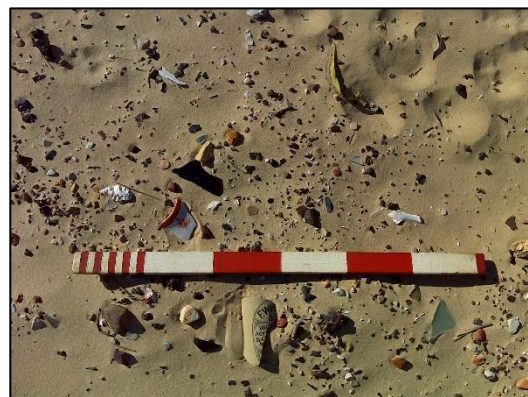
2. Pottery scatters

Pottery scatters can be associated with either Khoekhoen pastoralists, the Nguni first farming communities (referred to as the South African Iron Age) or colonial settlement and can be dated to within the last 2 000 years which occur both at the coast and inland. Pottery associated with Bushmen / hunter-gatherers is generally thought to occur in the Karoo region. The most obvious difference between Khoekhoen and Nguni pottery are the decorations, shapes, sizes and wall thickness. Khoekhoen pottery is generally thinner than the thicker walled and robust Nguni pottery. Colonial ceramics ranges from earthenware, stoneware, porcelain and European glazed and unglazed ceramics.

Precolonial pottery and colonial ceramics are more easily identifiable by the layman and should be reported.



**Khoekhoen earthenware pottery
(last 2 000 years)**



**Iron Age earthenware pottery
(last 2 000 years)**



Examples of 19th century European ceramics

3. Historical artefacts and features

These are easy to identify and include colonial artefacts (such as ceramics, glass, metal, etc.), foundations of buildings or other construction features and items from domestic and military activities associated with early travellers' encounters on the landscape and European settlement.



**Example of a Fortified Structure
(Fort Double Drift)**



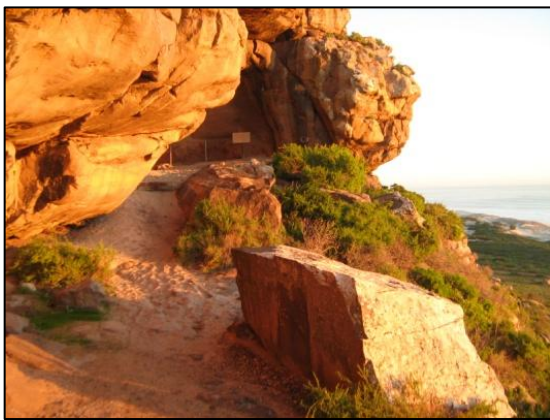
Ruin of stone packed dwelling



Glass artefacts

4. Shell middens (marine and freshwater)

Shell middens can be defined as an accumulation of marine or freshwater shell deposited by past human populations rather than the result of natural or animal activity. Marine shell middens occur all along the coast and may extend within 5 km of the coastline. This area is generally regarded as being archaeologically sensitive. The shells are concentrated in a specific locality above the high-water mark and frequently contain various edible and sometimes inedible marine shells, stone tools, pottery, bone (fish and animal) and occasionally also human remains. Shell middens may be of various sizes and depths, but an accumulation which exceeds 1 m² in extent, should be reported to an archaeologist. Freshwater shell middens occur along river banks and comprise freshwater shell, fish and animal bone, stone tools, pottery, and sometimes human remains.



Examples of the occurrence of coastal shell middens

5. Large stone features

They come in different forms and sizes, but are easy to identify. The most common are roughly circular stone walls (mostly collapsed) and may represent stock enclosures, remains of wind breaks or cooking shelters. Others consist of large piles of stones of different sizes and heights and are known as *isisivane*. They are usually near river and mountain crossings. Their purpose and meaning are not fully understood; however, some are thought to represent burial cairns while others may have symbolic value.



Examples of stone packed features

6. Graves, Burials and Human Skeletal material

Formal historical graves are easily identifiable as they are in most cases fenced off or marked with engraved headstones. Informal stone packed graves in several instances also occur within these fenced off areas.

It is difficult to detect the presence of archaeological human remains on the landscape as these burials, in most cases, are not marked at the surface. Human remains are usually observed when they are exposed through erosion or construction activities for development. Several human remains have been rescued eroding out of the dunes along this coastline and dongas in inland areas. In some instances, packed stones or rocks may indicate the presence of informal pre-colonial burials.

Human remains, whether the complete remains of an individual buried during the past, or scattered human remains resulting from disturbance of the grave, should be reported. In general, the remains are buried in a flexed position on their sides, but are also found buried in a sitting position with a flat stone capping and developers are requested to be on the alert for this.



Exposed human remains eroding out a coastal shell midden.



Exposed human remains eroding out an inland donga

APPENDIX D: CHANCE FINDS PROTOCOL

SITES UNCOVERED DURING THE PRE-CONSTRUCTION / CONSTRUCTION / POST-CONSTRUCTION PHASES OF THE DEVELOPMENT UNDER SECTIONS 34, 35, AND 36 OF THE NATIONAL HERITAGE RESOURCES ACT (NHRA) 25 OF 1999

The Chance Finds Protocol may include but not be limited to the following:

- A heritage practitioner should be appointed to develop a heritage induction program and conduct training for the ECO, as well as team leaders, in the identification of heritage resources and artefacts.
- The project / monitoring archaeologist should be called upon if any possible heritage resources or artefacts or exposed burial are identified.
- Should an archaeological site or cultural material be discovered during construction (or operation), the area should be demarcated, and construction activities be halted.
- The project / monitoring archaeologist will then need to come out to the site and evaluate the extent and importance of the heritage resources and make the necessary recommendations for mitigating the find and impact on the heritage resource.
- The contractor therefore should have some sort of contingency plan so that operations could move elsewhere temporarily while the material and data are recovered.
- Should the heritage consultant conclude that the find is a heritage resource protected in terms of the NHRA (1999) Sections 34, 35, 37 and NHRA (1999) Regulations (Regulation 38, 39, 40), he or she should notify the relevant PHRA. In this case the Eastern Cape Provincial Heritage Resources Authority (ECPHRA) –

Ms Lungiswa Mzazi - lungiswam@ecphra.org.za - (043) 492 1940/1/2 or 081 434 3544 /

OR

Ms Ayanda Mncwabe-Mama - Ayanda.mncwabe-mama@ecsrac.gov.za / (043) 492 1370 / 077 603 3035.

- Based on the comments received from the ECPHRA, the heritage consultant would present the relevant terms of reference to the client for implementation.

- Phase 2 mitigation in the form of test-pitting/sampling or systematic excavations and collections of the archaeological / heritage site may then be conducted to establish the contextual status of the sites and possibly remove the archaeological deposit before development activities continue. The project / monitoring / newly appointed professional archaeologist will make all the necessary permit applications to the ECPHRA. The costs for the phase 2 mitigation will be on the onus of the developer.
- Construction/Operational activities can commence as soon as the site has been cleared and signed off by the archaeologist.

**SECTIONS 34, 35, AND 36 OF THE NATIONAL HERITAGE RESOURCES ACT
(NHRA) 25 OF 1999 RELEVANT TO THE CHANCE FINDS PROTOCOL**

S34. Structures

- (11) No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.
- (12) Within three months of the refusal of the provincial heritage resources authority to issue a permit, consideration must be given to the protection of the place concerned in terms of one of the formal designations provided for in Part 1 of this Chapter.
- (13) The provincial heritage resources authority may at its discretion, by notice in the Provincial Gazette, make an exemption from the requirements of subsection (1) within a defined geographical area, provided that it is satisfied that heritage resources falling into the defined area or category have been identified and adequately provided for in terms of the provisions of Part 1 of this Chapter.
- (14) Should the provincial heritage resources authority believe it to be necessary if by, following a three-month notice period published in the Provincial Gazette, withdraw or amend a notice under subsection (3).

S35. Archaeology, palaeontology and meteorites

- (6) Subject to the provisions of section 8, the protection of archaeological and palaeontological sites and material and meteorites is the responsibility of a provincial heritage resources authority: Provided that the protection of any wreck in the territorial waters and maritime cultural zone shall be the responsibility of SAHRA.
- (7) Subject to the provisions of subsection (8)(a), all archaeological objects, palaeontological material and meteorites are the property of the State. The responsible heritage authority must, on behalf of the State, at its discretion ensure that such objects are lodged with a museum or other public institution that has a

collation policy acceptable to the heritage resources authority and may in doing so establish such terms and conditions as it sees fit for the conservation of such objects.

- (8) Any person who discovers archaeological or palaeontological objects or material or a meteorite in the course of development or agricultural activity must immediately report the find to the responsible heritage resources authority, or to the nearest local authority or museum, which must immediately notify such heritage resources authority.
- (9) No person may, without a permit issued by the responsible heritage resources authority—
- (e) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;
 - (f) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;
 - (g) trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or
 - (h) bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.
- (5) When the responsible heritage resources authority has reasonable cause to believe that any activity or development which will destroy, damage or alter any archaeological or palaeontological site is under way, and where no application for a permit has been submitted and not heritage resources management procedure in terms of section 38 has been followed, it may –
- (e) Serve on the owner or occupier of the site or on the person undertaking such development an order for the development to cease immediately for such period as is specified in the order;
 - (f) Carry out an investigation for the purpose of obtaining information on whether or not an archaeological or palaeontological site exists and whether mitigation is necessary;
 - (g) If mitigation is deemed by the heritage resources authority to be necessary, assist the person on whom the order has been served under paragraph (a) to apply for a permit as required in subsection (4); and
 - (h) Recover the costs of such investigation from the owner or occupier of the land on which it is believed an archaeological or palaeontological site is located or from the person proposing to undertake the development if no application for a permit is received within two weeks of the order being served.
- (10) The responsible heritage resources authority may, after consultation with the owner of the land on which archaeological or palaeontological site or a meteorite is situated, serve a notice on the owner or any other controlling authority, to prevent activities within a specified distance from such site or meteorite.
- (6)(a) Within a period of two years from the commencement of this Act, any person in possession of any archaeological or palaeontological material or object or any

meteorite which was acquired other than in terms of a permit issued in terms of this Act, equivalent provincial legislation or the National Monuments Act, 1969 (Act No. 28 of 1969), must lodge with the responsible heritage resources authority lists of such objects and other information prescribed period shall be deemed to have been recovered after the date on which this Act came into effect.

(b) Paragraph (a) does not apply to any public museum or university.

(c) The responsible authority may at its discretion, by notice in the Gazette or the Provincial Gazette, as the case may be, exempt any institution from the requirements of paragraph (a) subject to such conditions as may be specified in the notice, and may by similar notice withdraw or amend such exemption.

(8) and object or collection listed under subsection (7) –

(a) remains in the ownership of the possessor for the duration of his or her lifetime, and SAHRA must be notified who the successor is; and

(9) must be regularly monitored in accordance with regulations by the responsible heritage authority.

S36. Burial grounds and graves

(8) Where it is not the responsibility of any other authority, SAHRA must conserve and generally care for burial grounds and graves protected in terms of this section, and it may make such arrangements for their conservation as it sees fit.

(9) SAHRA must identify and record the graves of victims of conflict and any other graves which it deems to be of cultural significance and may erect memorials associated with the grave referred to in subsection (1), and must maintain such memorials.

(3)(a) No person may, without a permit issued by SAHRA or a provincial heritage resources authority—

(a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;

(b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or

(c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment which assists in the detection or recovery of metals.

(10) SAHRA or provincial heritage resources authority may not issue a permit for the destruction or damage of any burial ground or grave referred to in subsection (3)(a) unless it is satisfied that the applicant has made satisfactory arrangements for the exhumation and re-interment of the contents of such graves, at the cost of the applicant and in accordance with any regulations made by the responsible heritage resources authority.

(11) SAHRA or a provincial heritage resources authority may not issue a permit for any activity under subsection (3)(b) unless it is satisfied that the applicant has, in accordance with regulations made by the responsible heritage resources authority -

- (c) Made a concerted effort to contact and consult communities and individuals who by tradition have an interest in such grave or burial ground; and
 - (d) Reached agreements with such communities and individuals regarding the future of such grave or burial ground.
- (12) Subject to the provision of any other law, any person who in the course of development or any other activity discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the responsible heritage resources authority which must, in co-operation with the South African Police Service and in accordance with regulations of the responsible heritage resources authority –
- (d) Carry out an investigation for the purpose of obtaining information on whether or not such grave is protected in terms of this Act or is of significance to any community; and
 - (e) If such grave is protected or is of significance, assist any person who or community which is the direct descendant to make arrangements for the exhumation and re-interment of the contents of such grave or, in the absence of such person or community, make any such arrangements as it deems fit.
- (6)(a) SAHRA must, over a period of five years from the commencement of this Act, submit to Minister for his or her approval lists of graves and burial grounds of persons connected with the liberation struggle and who died in exile or as a result of the action of State security forces or agent's provocateur and which, after a process of public consultation, it believes should be included among those protected under this section.
- (f) The Minister must publish such lists as he or she approved in the Gazette.
- (13) Subject to section 56(2), SAHRA has the power, with respect to the graves of victims of conflict outside the Republic, to perform any function of a provincial heritage resources authority in terms of this section.
- (14) SAHRA must assist other State Departments in identifying graves in a foreign country of victims of conflict connected with the liberation struggle and, following negotiations with the next of kin, or relevant authorities, it may reinter the remains of that person in a prominent place in the capital of the Republic.

